VPDES PERMIT PROGRAM FACT SHEET
FILE NO: VA0091294@ECM

This document gives pertinent information concerning the VPDES Permit listed below. This permit is being processed as a **MINOR, INDUSTRIAL** permit.

1. **PERMIT NUMBER:** VA0091294 **EXPIRATION DATE:** October 30, 2011

2. **FACILITY NAME / MAILING ADDRESS:**

Chesapeake Marine Railway, LLC
548 Deagle's Road
Deltaville, Virginia 23043

FACILITY LOCATION ADDRESS: (IF DIFFERENT)

SAME

CONTACT AT FACILITY:
NAME: Mr. Jon Farinholt
TITLE: Chief Operating Officer
PHONE: (804) 776-8833
EMAIL: jon@chesapeakeboatworks.com

CONTACT AT LOCATION ADDRESS

SAME

3. **OWNER CONTACT:** (TO RECEIVE PERMIT)
NAME: Mr. Jon Farinholt
TITLE: Chief Operating Officer
COMPANY NAME: SAME AS 2. ABOVE
PHONE: (804) 776-8833
EMAIL: jon@chesapeakeboatworks.com

CONSULTANT CONTACT:

NONE

4. **PERMIT DRAFTED BY:** DEQ, Water Permits, Tidewater Regional Office (on behalf of Piedmont Regional Office)

Permit Writer(s): C. Thomas CMT Date(s): August-November 2013, April, 21 2014, July 2, 2014, July 18, 2014, September 23, 2014, October 8, 2014

Reviewed By: M. Sauer (TRO WPM) Date: 12/05/2013
E. Adamson (PRO WPM) Date: 04/07/2014, 07/18/2014 10/06/2014
PRO

5. **PERMIT ACTION:**

( ) Issuance **(X) Reissuance** ( ) Revoke & Reissue ( ) Owner Modification
( ) Board Modification ( ) Change of Ownership/Name [Effective Date: N/A]

6. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment 1 Site Inspection Report/Memorandum
Attachment 2 Discharge Location/Topographic Map
Attachment 3 Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4 TABLE I - Discharge/Outfall Description
Attachment 5 TABLE II - Effluent Monitoring/Limitations
Attachment 6 Effluent Limitations/Monitoring Rationale/Suitable Data/ Antidegradation/Antibacksliding
Attachment 7 Special Conditions Rationale
Attachment 8 Toxics Monitoring/Toxics Reduction/WET Limit Rationale
Attachment 9 Material Stored
Attachment 10 Receiving Waters Info./Tier Determination/STORET Data/ Stream Modeling
Attachment 11 303(d) Listed Segments
Attachment 12 TABLE III(a) and TABLE III(b) - Change Sheets
Attachment 13 NPDES Industrial Permit Rating Worksheet
Attachment 14 Chronology Sheet
Attachment _____ Public Participation

APPLICATION COMPLETE: October 2, 2012 (per PRO letter of same date)

7. **PERMIT CHARACTERIZATION:** (Check as many as appropriate)

(X) Existing Discharge	(X) Effluent Limited
( ) Proposed Discharge	(X) Water Quality Limited (TBT)
( ) Municipal	( ) WET Limit
SIC Code(s)	( ) Interim Limits in Permit
(X) Industrial	( ) Interim Limits in Other Document
SIC Code(s): 3732, 4499	( ) Compliance Schedule Required
( ) POTW	( ) Site Specific WQ Criteria
( ) PVOTW	( ) Variance to WQ Standards
(X) Private	( ) Water Effects Ratio
( ) Federal	( ) Discharge to 303(d) Listed Segment
( ) State	(X) Toxics Management Program Required
( ) Publicly-Owned Industrial	( ) Toxics Reduction Evaluation
( ) Pretreatment Program Req'd	(X) Storm Water Management Plan
( ) Possible Interstate Effect	( ) CBP Significant Dischargers List

8. **RECEIVING WATERS CLASSIFICATION:** River basin information.

Outfall No(s):	i.	001 (101), 008 (908), 009 (909)
	ii.	002
Receiving Stream:	i.	Fishing Bay to Piankatank River
	ii.	Unnamed Tributary (UT) to Piankatank River
River Mile:	i.	7-PNK003.85
	ii.	7-XAL000.22
Basin:		Chesapeake Bay, Atlantic Ocean & Small Coastal Basins
Subbasin:		N/A
Section:		2
Class:		II
Special Standard(s):		a
Tidal:	i.	YES
	ii.	NO

i.	7-Day/10-Year Low Flow:	NA	ii.	0 (assumed, Attachment 10)
	1-Day/10-Year Low Flow:	NA		0
	30-Day/5-Year Low Flow:	NA		0
	Harmonic Mean Flow:	NA		0

9. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

Existing industrial discharges resulting from applicant's operation of a full service vessel repair and maintenance facility. The applicant operates three vessel hauling systems at the site. Two systems are conventional marine railways (100 Ton & 300 Ton) atop unpaved surfaces, and the third is a mobile travel-lift (50 Ton) operated from a fixed location adjacent to a concrete pad along the waterfront. The applicant maintains an upland vessel storage and maintenance activity and has several buildings on site in which industrial activities are performed or support those functions.

10. **LICENSED OPERATOR REQUIREMENTS:** **(X) No** ( ) Yes Class: NA

11. **RELIABILITY CLASS:** Industrial Facility - NA

12. **SITE INSPECTIONS:**

	DATE OF VISIT:	REPORT DATE:	PERFORMED BY:
a)	07/28/2009	08/07/2009	H. Horne (PRO)
b)	04/22/2013	photos only	J. Bauer & Jeremy Kazio (PRO)
b)	09/11/2013	09/27/2013	C. Thomas (TRO)

SEE ATTACHMENT: 1

13. **DISCHARGE(S) LOCATION DESCRIPTION:** Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Saluda Topo Quadrant No.: 123D

SEE ATTACHMENT: 2

14. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.].** For industrial facilities, provide a general description of the production cycle(s) and activities. For municipal facilities, provide a general description of the treatment provided.

SEE ATTACHMENT: 3

15. **DISCHARGE DESCRIPTION:** Describe each discharge originating from this facility.

SEE ATTACHMENT; 4

16. **COMBINED TOTAL FLOW:** For public notice information.

TOTAL FLOW: 0.001 MGD

PROCESS FLOW: 0.001 MGD)

NONPROCESS/RAINFALL DEPENDENT FLOW: no data for 002, 908 or 909 MG (est.)

17. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS & SPECIAL CONDITIONS:** (Check all which are appropriate)

- [X] State Water Control Law
- [X] Clean Water Act
- [X] VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
- [X] EPA NPDES Regulation (Federal Register)
- [ ] EPA Effluent Guidelines (40 CFR 133 or 400 - 471)
- [X] Water Quality Standards (9 VAC 25-260-5 et seq.)
- [ ] Wasteload Allocation from a TMDL or River Basin Plan

18. **EFFLUENT LIMITATIONS/MONITORING:** Provide all limitations and monitoring requirements being placed on each outfall.

SEE ATTACHMENT: 5

19. **EFFLUENT LIMITATIONS/MONITORING RATIONALE:** Attach any analyses of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic and human health); effluent limitations determination; input data listing. Include all calculations used for each outfall and set of effluent limits and those used in any model(s). Include all calculations/ documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limiting internal waste streams and indicator pollutants. Attach chlorine mass balance calculations, if performed. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested variances or alternatives to required permit conditions/limitations. This includes, but is not limited to: waivers from testing requirements; variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

N/A

SUITABLE DATA: What, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

With the exception of outfall 001 under the current permit, all suitable effluent data were reviewed. Outfall 001 wastewaters (process wastewater from travel-lift concrete pad haul location) were eliminated by the permittee (2011), but the operation was relocated to an upland site in proximity to the concrete pad where vessels are first hauled.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

The receiving stream has been classified as Tier 2 (See Attachment 10); therefore, no significant degradation of the existing water quality will be allowed. See antidegradation calculations/determinations (Attachment 6). This aspect of the permit reissuance process brings greater scrutiny upon known point source discharges of process wastewater and contaminants.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit (i.e., limits as stringent or more stringent when compared to the previous permit).

SEE ATTACHMENT 6

20. SPECIAL CONDITIONS RATIONALE: Provide a rationale for each of the permit's special conditions.

SEE ATTACHMENT: 7

21. TOXICS MONITORING/TOXICS REDUCTION & WET LIMIT SPECIAL CONDITIONS RATIONALE: Provide the justification for any toxics monitoring program and/or toxics reduction program and WET limit.

SEE ATTACHMENT: 8

22. SLUDGE DISPOSAL PLAN: Provide a description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

Not applicable.

23. MATERIAL STORED: List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching surface waters.

SEE ATTACHMENT: 9

24. RECEIVING WATERS INFORMATION: Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260-5 et seq.). Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied. Attach any memoranda or other information which helped to develop permit conditions (i.e. tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc.

SEE ATTACHMENT: 10

25. 305(b)/303(d) Listed Segments: Indicate if the facility discharges to a segment that is listed on the current 303(d) list and, if so, provide all appropriate information/ calculations.

This facility discharges to an unnamed tributary to Piankatank River (002) and Fishing Bay (001, 008, 009), a second tributary to the Piankatank River.

During the 2010 305(b)/303(d) Water Quality Assessment, Fishing Bay was considered a Category 5A water ("A Water Quality Standard is not attained). The water is impaired or threatened for one or more designated uses by a pollutant(s) and requires a TMDL (303d list)". The applicable fact sheets are provided (Attachment 10). The Aquatic Life Use is impaired due to low dissolved oxygen and inadequate submerged aquatic vegetation (SAV) in the Piankatank River mesohaline estuary (PIAMH). The Fish Consumption Use is impaired due to a VDH advisory for PCBs in anadromous (coastal) striped bass. The Shellfish Consumption Use is considered fully supporting with observed effects due to a seasonal VDH condemnation. The Recreation and Wildlife Uses are fully supporting.

Pertaining to the PCB impairment, the applicant provided Total PCB data (<0.5 ug/l) as well as data for Arochlor congeners 1016 (<0.5 ug/l), 1221

(<0.5 ug/l), 1232 (<0.5 ug/l), 1242 (<0.5 ug/l), 1248 (<0.5 ug/l), 1254 (<0.2 ug/l), and 1260 (<0.2 ug/l), with Attachment A submitted with the permit application. In this regard, and based on information presented with the application submitted for permit renewal, there are no indications that this facility is a prime or contributing source of PCBs resulting in the impairment noted above.

The tributary was not assessed for any of its designated uses; therefore it is considered a Category 3A waterbody.

The Lower Piankatank River Shellfish TMDL was approved by EPA 11/15/2005 and by SWCB on 9/27/2006. The facility was not addressed in the TMDL.

Chesapeake Marine Railway was included in the Chesapeake Bay TMDL, which was approved by the EPA on 12/29/2010. The facility was included in the aggregated total nitrogen, total phosphorus, and total suspended solids wasteload allocations for non-significant wastewater dischargers in the Piankatank River mesohaline estuary (PIAMH).

This facility discharges directly to the Piankatank River in the Chesapeake Bay watershed in the Piankatank River mesohaline estuary (PIAMH) segment. The receiving stream has been addressed in the Chesapeake Bay TMDL, approved by EPA on December 29, 2010. The TMDL addresses dissolved oxygen (DO), chlorophyll a, and submerged aquatic vegetation (SAV) impairments in the main stem Chesapeake Bay and its tidal tributaries by establishing non-point source load allocations (LAs) and point-source waste load allocations (WLAs) for total nitrogen (TN), total phosphorus (TP) and total suspended solids (TSS) to meet applicable Virginia Water Quality Standards contained in 9VAC25-260-185.

Implementation of the Chesapeake Bay TDML is currently accomplished in accordance with the Commonwealth of Virginia's Phase I Watershed Implementation Plan (WIP), approved by EPA on December 29, 2010. The approved WIP recognizes the "General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed of Virginia" (9VAC25-820) as controlling the nutrient allocations for non-significant Chesapeake Bay dischargers. The approved WIP states that for non-significant municipal and industrial facilities, nutrient WLAs are to be consistent with Code of Virginia procedures, which set baseline WLAs to 2005 permitted design capacity nutrient load levels. In accordance with the WIP, TN and TP WLAs for non-significant facilities are considered aggregate allocations and will not be included in individual permits. The WIP also considers TSS WLAs for non-significant facilities to be aggregate allocations, but TSS limits are to be included in individual VPDES permits in conformance with the technology-based requirements of the Clean Water Act. However, the WIP recognizes that so long as the aggregated TSS permitted loads for all dischargers is less than the aggregated TSS load in the WIP, the individual permit will be consistent with the TMDL.

40 CFR 122.44(d)(1)(vii)(B) requires permits to be written with effluent limits necessary to meet water quality standards and to be consistent with the assumptions and requirements of applicable WLAs. This facility is considered a Non-Significant Chesapeake Bay discharger because it is an existing facility with a permitted design capacity flow of less than 100,000 gallons per day into tidal waters. This facility has not made application for a new or expanded discharge since 2005. It is therefore covered, by rule, under the 9VAC25-820 regulation. In accordance with the WIP, TN and TP load limits are not included in this individual permit, but are consistent with the TMDL because the current nutrient loads are in conformance with the facility's 2005 permitted design capacity loads. This individual permit includes monitoring for TSS and BMP requirements that are in conformance with technology-based requirements and, in turn, are

consistent with the Chesapeake Bay TMDL. Given these conditions, this facility can neither cause nor contribute to an observed violation of the standards, and is consistent with the TMDL.

Both receiving streams should be considered Tier II waters. Although the Piankatank River is impaired for the Aquatic Life Use, the impairments are based on segment-wide conditions and are not necessarily indicative of local water quality conditions in proximity to Chesapeake Marine Railway. Fishing Bay was sampled on 7/7/2009 at station 7-PNK003.72 which is located approximately 0.2 mile from the discharge and all parameters met the water quality standards (data is attached) and should be considered Tier 2. The tributary has not been monitored and therefore defaults to a Tier 2 water.

SEE ATTACHMENTS: 10 & 11

26. **CHANGES TO PERMIT:** Use **TABLE III(a)** to record any changes from the previous permit and the rationale for those changes. Use **TABLE III(b)** to record any changes made to the permit during the permit processing period and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT: 12

27. **NPDES INDUSTRIAL PERMIT RATING WORKSHEET:**

TOTAL SCORE: 38

SEE ATTACHMENT: 13

28. **DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT:** Document comments received from DEQ planning.

The discharge is in conformance w/ existing planning documents for the area. This was verified by PRO Planning e-mail of 07/28/2014, (Attachment 10).

29. **PUBLIC PARTICIPATION:** Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

VDH/DSS COMMENTS RECEIVED ON DRAFT PERMIT: Document comments received from Virginia Dept. of Health/Drinking Water and the Division of Shellfish Sanitation, and note how resolved.

The VDH reviewed the application and waived their right to comment and/or object on the adequacy of the draft permit, per memorandum from the VDH's East Central Field Office, dated August 9, 2011.

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved.

EPA waived the right to comment and/or object to adequacy of draft permit.

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.), note how resolved.

Not Applicable.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT: Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation, and no comments were received.

ADDITIONAL CONTENT TO BE APPLIED SUBSEQUENT TO COMPLETION OF, OR AS A RESULT OF PUBLIC NOTICE PROCESSING AND COMMENTS RECEIVED (CDT 07/18/2014)

PUBLIC NOTICE INFORMATION: Comment Period: Start Date: October 23, 2014

End Date: November 24, 2014

The final day of public notice falls on Saturday November 22, 2014. In this case, the public notice will continue until Monday, November 24, 2014.

Persons may comment in writing or by e-mail to the DEQ on the proposed reissuance of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The Director of the DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requestor's interests would be directly and adversely affected by the proposed permit action.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Carl D. Thomas at: Department of Environmental Quality (DEQ), Tidewater Regional Office, 5636 Southern Boulevard, Virginia Beach, Virginia 23462. Telephone: 757-518-2161; e-Mail: carl.thomas@deq.virginia.gov .

Following the comment period, the Board will make a determination regarding the proposed reissuance. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

30. ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:

This permit is being reissued as part of a Work Share agreement between the VaDEQ's Water Permit staff of the Tidewater (TRO) and the Piedmont (PRO) Regional Offices. Once the permit is fully developed and issued, responses to public notice comments and eventual oversight of the permitted facility and actions necessary to verify compliance with the reissued permit's terms and conditions will revert back to the PRO.

ADDITIONAL STAFF COMMENTS:

The permit was not reissued prior to the expiration date due to delays in processing attributed to the Department.

Annual permit fees were deposited on September 27, 2013, and are current.

At the time of fact sheet preparation, the staff believes that discharges of process wastewaters and storm water associated with industrial activities from this permitted facility, are not controversial.

The Middlesex County Administrator - Matt Walker: m.walker@co.middlesex.va.us Middlesex Chairman of the Board of Supervisors - John D. Miller, Jr., supervisorjackmiller@yahoo.com, and Executive Director of the Middle Peninsula Planning District - Lewis Lawrence, III: llawrence@mppdc.com were each notified of the public comment period on October 20, 2014, in accordance with the Code of Virginia, §62.1-44.15:01. The names and contact information noted above were derived from Middlesex County's and the MPPDC's websites on October 20, 2014.

The permittee is not currently registered for participation in the VaDEQ's eDMR Program, but will be invited to participate in this program as part of the final permit's transmittal letter.

The permittee is not yet a participant in Virginia's Environmental Excellence Program (VEEP).

Rev. 1/1/2013

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of process wastewaters and storm water from industrial activities into a water body in Middlesex County, Virginia.

PUBLIC COMMENT PERIOD: **Thirty** (30) days from the first date of this public notice (**date to be inserted by newspaper**)

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – process wastewaters and storm water from industrial activities issued by DEQ, under the authority of the State Water Control Board.

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Chesapeake Marine Railway, LLC; 548 Deagle's Road, Deltaville, Virginia 23043, VA0091294.

FACILITY NAME AND LOCATION: Same as above.

PROJECT DESCRIPTION: Chesapeake Marine Railway, LLC has applied for reissuance of a permit for the private Chesapeake Marine Railway, LLC. The applicant proposes to release process wastewaters and storm water from industrial activities at a rate of 0.001 millions of gallons per day (MGD) into a water body. The facility proposes to release the process wastewaters and industrial storm water into Fishing Bay in Middlesex County in the Chesapeake Bay, Atlantic Ocean and Small Coastal Basin watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, tributyltin exclusion.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing hand-delivery, by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: Jamie Bauer; Piedmont Regional Office; 4949-A Cox Road, Glen Allen, Virginia 23060; Phone: (804) 527-5020; E-mail: Jaime.Bauer@deq.virginia.gov; Fax: FAX NUMBER. The public may review the draft permit and application at the DEQ office named above by appointment or may request copies of the documents from the contact person listed above.

ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM

MEMORANDUM
DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE

Water Permits Section
5636 Southern Boulevard

Virginia Beach,
Virginia 23462

SUBJECT: Reissuance of VPDES Permit Number VA0091294
Chesapeake Marine Railway, LLC
Deltaville, Virginia

TO: Permit File

FROM: C. Thomas

DATE: September 27, 2013

COPIES: None

1. On September 11, 2013, a site visit to the subject facility was performed to verify information presented in the permit application package received at the Piedmont Regional Office (PRO) May 3, 2011. The application was deemed complete by the PRO on October 2, 2012. Based on a work share agreement between the TRO and PRO, the TRO will initially process the permit and PRO completing the permit's development by public noticing the permit and concluding the processing with permit reissuance. Upon arrival at the site's main office, and following introductions and discussions as to the purpose of the visit, a tour of the facility commenced. Leading the tour was Mr. Jon Farinholt, COO of the subject facility. The facility is a small vessel repair and maintenance activity operating two conventional marine railways (300T, 100T) and a single travel lift (50T) as vessel hauling systems. At the time of the visit, the larger of the two railways (300T) was inoperable due to damage to the railway system near shore but below water. It was noted that repairs to the larger railway would occur at a later, unspecified time. No vessel repair or hull preparation activities were taking place on the railways or at the travel lift operation, at the time of the site visit.

3. Moving from the facility back to the access roadway, the point where storm water runoff entering the facility's fence line was observed and discussed . Storm water from a state maintained roadway and surrounding properties enters into ditches along the road. A pipe runs under the road from the ditch along the road's north side into a ditch adjacent to the facility's fencing that surrounds the site's upland vessel storage and maintenance area. That flow continues into another pipe that runs beneath the upland yard area and into a confined wetland system lying to the south, in proximity to the upland yard. Outfall 002 is that point where the site's runoff enters the general location where the conveyance pipe protrudes from the bank along the southern side of the upland yard. Adjacent to this outfall is a depressed and eroded area where runoff from portions of the upland yard appears to flow to the confined wetland system, based on observations at that location. It is unknown if the confined portion of the wetland associated with outfall 002 was designed or constructed in a manner to serve as any sort of treatment unit, sedimentation basin, or lagoon. As of the date of the approved application, samples of storm water runoff had not been obtained based on DMR information filed by the permittee. It is probable that the reissued permit will address this situation in some manner since a designated sampling point has not been established such that regular sampling of representative storm water discharges from the upland maintenance and storage yard can occur over the term of the reissued permit.

4. Visiting the upland vessel maintenance/storage location, it was clear that the site was completely fenced and under observation by facility staff and clients. Based on discussions at this location, it was learned that clients are discouraged from performing many repair or maintenance activities involving removal of existing hull coatings or activities involving motors or other onboard machinery and equipment. Material, appearing to be heavy-weight and permeable fabric, was observed beneath the hulls of many vessels parked at this location. For the most part, those fabric ground covers where generally clean without excessive accumulations of contaminants typical of this industry. The applicant noted that this ground covering material is provided to their clients upon request or when the industrial activities performed by the company require its use as a best management practice (BMP). Based on observations at this location, there were no accumulations of zinc anodes, open or wasted paint or petroleum containers, or industrial activities being performed without controls in place and functioning as intended.

5. Moving back to the main yard, it was noted that empty or partially filled but unused paint cans are collected and stored at a designated location in the main office and supply building. This appeared to be the cast since few empty or wasted paint containers were evident at inappropriate locations during the site visit. Sanitary wastes from the site's main office are dealt with via an on-site septic tank system(s) near that location. Although located near this facility, an adjacent marina operation and client amenity center are not affiliated directly with Chesapeake Marine Railway, LLC, and its activities not covered by the subject VPDES permit. With exception of access roadways, the facility is largely unpaved with impervious materials, and surfaces consist of sand native to the area, or gravel and crusher-run used to stabilize erodible soils in and around industrial areas at the site.

6. The travel lift activity, designated outfall 001, lies adjacent to the receiving stream. The lift hauls vessels from the water and moves them to locations at the facility where storage, repair or maintenance activities will be performed. Following the initial haul, vessels are power-washed to remove salts or other expected fouling from the wetted hulls. At some point during the term of the current permit, the point source discharge (pipe) from this site of wastewater generation was sealed and no longer discharges from the wastewater collection and settling tank installed beneath the travel lift's concrete pad.. As noted at this point, vessels are now moved off of the concrete pad to an adjacent area comprised mainly of #57 granite gravel where vessels are washed while resting in the lift's haul slings. At the time of the visit, there was no visible staining from paints, oil or petroleum products on the concrete pad or the nearby gravel area where vessels are initially prepared following removal from the waterway. It is not a typical practice to perform extensive or numerous maintenance activities or repairs while the vessel is supported by the slings of the travel lift. Following haul and initial preparations, vessels are then moved to stable hard stands at the upland area for further activities to occur, or storage based on the needs of their clients.

7. Both marine railway locations were inactive and no vessels were hauled atop the open carriages, typical of these systems. The surface areas beneath each railway is comprised of native soils (sand) and some amount of gravel and other materials deposited over time, from the edge of water to the upslope extent of the carriages' travel. During this visit, there was little evidence of accumulated paint chips or other residues typical of vessel repair operations usually found at less attentive facilities engaged in similar industrial activities. There was no evidence of abrasive materials having been used in the recent past and no observations or accumulations of incoming or spent abrasive blast materials present at the facility. Observations and photographs from a past inspection (7/28/2009) documented the site's upslope activities at the railways were impacting both soils beneath and around the railways (visible blue paint chips, removed biological, etc.) as well as discolored runoff (blue water) entering surface waters via erosion pathways. During this site visit, no photographs were taken and no discolored wastewater discharges were observed.

8. Moving back to the site's office, industrial activities performed at or near buildings at the facility were observed and discussed. Near the woodwork shop is where clients and staff deposit waste oils and oily wastes generated during vessel repair and maintenance activities. With the possible exception of one tank, other tanks available at this location were not contained by berms or other suitable protections that would retain waste petroleum products transferred at this accumulation point should control be lost. Although some minor staining of underlying soils was present, the staining did not appear excessive or wide spread. Again, some protective measures to contain the tankage and protect underlying soils at this location would be both a suitable and an appropriate BMP.

9. In conclusion, the application filed by the applicant in 2011 fairly and accurately represents the ongoing industrial activities at this permitted site. Since process wastewaters, as defined by the Department, continue to be generated and a reasonable potential remains for those industrial wastewaters to enter surface waters of the State, the current VPDES permit should be reissued. Of particular note, is that there are a number of other similar vessels repair activities, each with one or more travel lift hauling systems present, all observed at short distances from this permitted facility. Those other sites, where potentially contaminated and toxic wastewater discharges are expected to occur, are not covered by individual VPDES permits at the time of this permit's required reissuance.

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Rd Glen Allen, VA 23060 (804) 527-5020

SUBJECT: Site Visit- Chesapeake Marine Railway VA0091294
TO: File
FROM: Janine Howard, PRO
DATE: 24 August 2010

This site visit took place on August 23, 2010. Ray Jenkins and I met with Jon Farinholt, COO. The facility is located at 548 Deagle's Road Deltaville, Virginia. Operations at the site include boat power-washing, painting, restoration, and repair. The current permit includes seven outfalls, three process (001, 008, and 009), and four stormwater (002, 901, 908, 909).

The process water outfalls result from power-washing boats that are hoisted onto one of the two railways on-site or the travel lift (Figure 1 and 3). These discharges are intermittent and only occur during powerwashing. Outfall 001 is located at the travel lift (Figure 4), outfall 009 at the 300 ton railway, and outfall 008 at the 100 ton railway. Each process outfall appears to be identical in terms of characteristic waste stream, i.e. powerwashing runoff. Each outfall is associated with a stormwater outfall 901, 908, and 909 respectively. The ground cover below the railways and travel lift is sand, and considerable difficultly is associated at present with the collection of process and stormwater samples as the water is immediately absorbed upon hitting the beach. Outfall 001 is associated with a drain on the concrete pad associated with the travel lift (Figure 2). This drain empties into a septic tank, which when full, overflows into a pipe which discharges into the water (outfall 001). A fourth stormwater outfall is identified as outfall 002 (Figure 5). This consists of a 15" storm sewer which collects runoff from the access road to the facility (Deagle's Road), channels it underneath the property and discharges into a pond off-site. This storm sewer channels water that is collected in small swales on either side of the shared access road.

Ground mats are used to collect solids under every boat that is worked on, including those in the boatyard (Figure 6). The facility routinely inspects the docks on-site to maintain site cleanliness. The operator indicated that some changes to the site are planned for the near future. The bulkhead that exists near the travel lift is due to be extended to the machine shop. This would eliminate the concrete wash rack, which would be replaced by beach. Additional construction includes converting 300 ton railway into an all-steel railway (presently it is a mix of wood and steel) and making it large enough so that a boat can be hauled to a point at minimum 75 feet from the shoreline. This is the goal for the smaller 100 ton railway as well. This construction is due to be complete prior to the permit expiration in October 2011.

Virginia Department of Environmental Quality

WASTEWATER FACILITY INSPECTION REPORT

FACILITY NAME: Chesapeake Marine Railway LLC	**INSPECTION DATE:** 7/28/09		
	INSPECTOR Heather A. Horne hah 8-7-09		
PERMIT No.: VA0091294	**REPORT DATE:**		
TYPE OF FACILITY: ☐ Municipal ☑ Small Minor ☑ Industrial ☐ Federal	**TIME OF INSPECTION:**	1352 Arrival	1528 Departure
	TOTAL TIME SPENT (including prep & travel)	8 hours	
PHOTOGRAPHS: ☑ Yes ☐ No	**UNANNOUNCED INSPECTION?** ☐ Yes ☑ No		
REVIEWED BY / Date: Kww 08/12/09			
PRESENT DURING INSPECTION: Meredith Williams, DEQ; Jon Farinholt, CMR			

TECHNICAL INSPECTION

1. Has there been any new construction? • If so, were plans and specifications approved? Comments:	☐ Yes ☑ No
2. Is the Operations and Maintenance Manual approved and up-to-date? Comments: O&M has been drafted and is in the process of revisions after review by DEQ.	☐ Yes ☑ No
3. Are the Permit and/or Operation and Maintenance Manual specified licensed operator being met? Comments:	☑ Yes ☐ No
4. Are the Permit and/or Operation and Maintenance Manual specified operator staffing requirements being met? Comments:	☑ Yes ☐ No
5. Is there an established and adequate program for training personnel? Comments:	☑ Yes ☐ No
6. Are preventive maintenance task schedules being met? Comments:	☑ Yes ☐ No
7. Does the plant experience any organic or hydraulic overloading? Comments:	☐ Yes ☑ No
8. Has there been any bypassing or overflows since the last inspection? Comments:	☐ Yes ☑ No
9. Is the standby generator (including power transfer switch) operational and exercised regularly? Comments: N/A	☐ Yes ☑ No
10. Is the plant alarm system operational and tested regularly? Comments: N/A	☐ Yes ☑ No

VA DEQ Wastewater Facility Inspection Report

Permit #	VA0091294

TECHNICAL INSPECTION

11. Is sludge disposed of in accordance with the approved sludge management plan? Comments: N/A	☐ Yes ☐ No
12. Is septage received? • If so, is septage loading controlled, and are appropriate records maintained? Comments: N/A	☐ Yes ☐ No
13. Are all plant records (operational logs, equipment maintenance, industrial waste contributors, sampling and testing) available for review and are records adequate? Comments:	☑ Yes ☐ No

14. Which of the following records does the plant maintain?

☑ Operational logs ☑ Instrument maintenance & calibration

☑ Mechanical equipment maintenance ☐ Industrial Waste Contribution (Municipal facilities)

Comments:

15. What does the operational log contain?

☐ Visual observations ☐ Flow Measurement ☑ Laboratory results ☐ Process adjustments

☐ Control calculations ☐ Other (specify)

Comments:

16. What do the mechanical equipment records contain?

☐ As built plans and specs ☑ Manufacturers instructions ☐ Lubrication schedules

☑ Spare parts inventory ☑ Equipment/parts suppliers

☐ Other (specify)

Comments:

17. What do the industrial waste contribution records contain (Municipal only)?

☐ Waste characteristics ☐ Impact on plant ☐ Locations and discharge types

☐ Other (specify)

Comments: N/A

18. Which of the following records are kept at the plant and available to personnel?

☑ Equipment maintenance records ☑ Operational log ☐ Industrial contributor records

☑ Instrumentation records ☑ Sampling and testing records

Comments:

19. List records not normally available to plant personnel and their location:

Comments: N/A

20. Are the records maintained for the required time period (three or five years)? Comments:	☑ Yes ☐ No

VA DEQ Wastewater Facility Inspection Report

Permit #	VA0091294

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS

Pressure Wash Rack- Pressure washing is performed on a double rail over a concrete pad. Water drains to a sump, when the sump fills, wastewater discharges to Fishing Bay. Very small amounts of debris (paint chips) were observed on the pad leading to the sump. The discharge pipe is submerged during high tide causing the sump to sometimes fill with ambient water. Process water (001) from this area is sampled 1/6months. Quarterly acute toxicity tests are also performed. Stormwater runoff from this area is sampled annually (Outfall 901). As discussed during a meeting with a DEQ permit writer, enforcement representative, and inspectors the facility plans to alternate stormwater sampling from the outfall pipe and the entrance to the sump. It is unknown whether the sump is providing adequate settling or a representative sample due to the ambient water interference.

Operational Railway- Two operational railways are present (process water Outfalls 008 and 009). At the time of inspection, Outfall 009 railway had a vessel present. Roller painting was occurring on this vessel. The Outfall 008 railway was vacant. Both railways are located over predominately sandy soil. When the railway is in use, a cloth is placed on the ground between rails to catch debris. The cloth beneath the active rail had reportedly been in use for approximately 3 months and was heavily coated with solids. The facility acknowledged this cloth needs to be replaced. Because the railway is located on soil, the facility reports difficulty in sampling. Process water samples are currently collected off the keel in a plastic tarp and transferred to a sample container supplied by the commercial laboratory. The VPDES permit requires once per six months process water sampling and quarterly toxicity testing. Inspectors noted wood shavings/chips on the ground around the Outfall 009 rail. Inspectors reminded the facility that this type of debris must be removed daily or before high tide. Later, inspectors noted men raking and removing this material. The facility does not sand blast on the railway. During significant rain events, water discharged from the railways is via Outfalls 908 and 909. The VPDES permit requires stormwater from the railways be collected once per year between April and June. Although the facility stated stormwater sample collection is difficult, inspectors pointed out evidence of channeling in the sand surrounding the railway, indicating sample collection may be possible.

Small Boat Yard- Maintenance on small boats is conducted in a designated area. The facility requires that tarps be placed under all boats stored in the yard. Material collected on the tarps (paint chips, woody debris, etc) is placed in the onsite dumpster. At the time of inspection, one boat owner was sanding the bottom of his boat. The tarp appeared to adequately capture the debris associated with this activity. There is a berm that surrounds the southern portion of the small boat yard. This area is graded to direct all stormwater to a large sedimentation basin. Stormwater from the County road also flows to the basin. Water enters the basin via a rip-rapped spillway. The sedimentation basin and surrounding area are heavily vegetated and sample collection may be difficult. Controlling the vegetation may facilitate sampling this area. Water discharges from the basin via a pipe (Outfall 002) to enter a pond area. This pond level is manually controlled by an adjacent property owner. The pond discharges to Fishing Bay. The VPDES permit requires annual stormwater sampling from Outfall 002 to occur between April and June. Inspectors reminded the facility that the VPDES permit requires that the sedimentation basin be inspected monthly. Inspectors recommended that this information be recorded on one of the weekly BMP inspection sheets.

Stormwater Outfalls 003-007 & 010- These outfalls are piers/docks on the eastern portion of the facility (adjacent to the operational railways). No environmental impacts were observed in association with these docks. The VPDES permit does not require stormwater monitoring on these outfalls. An oily sheen was observed on the water in the vicinity of Outfall 007 (not discharging at the time of inspection). The source was not determined, but may have been from the neighboring marina.

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS (continued)

Equipment/Chemical Storage- There is not a fueling station for vessels located onsite. A used oil tank is located adjacent to the Outfall 008 railway. This tank is pumped and hauled away by a contractor. No spills or leaks were noted. If a vessel arrives with contaminated bilge/ballast water, water is pumped out at the adjacent Fishing Bay Harbour Marina facilities. Battery storage and engine maintenance are conducted under roof in the mechanic shop. Sweepings from around the railway are sent to the local landfill. Spent solvents are removed by a contractor. Spray painting is conducted in the large shed located in the small boat yard. Paints and other chemicals are stored in the supply room in the main office. Inspectors viewed several paints used on vessels and did not find any containing tributyl tin (TBT).

Site Records- The shipyard is checked daily and all inspections are noted on a clipboard in the main office. See attached lab report for information regarding sampling records at this facility.

VA DEQ Wastewater Facility Inspection Report

Permit #	VA0091294

EFFLUENT FIELD DATA: No discharge at time of inspection.

Flow	MGD	**Dissolved Oxygen**	mg/L	**TRC (Contact Tank)**	mg/L
pH	S.U.	**Temperature**	°C	**TRC (Final Effluent)**	mg/L

Was a Sampling Inspection conducted? ☐ Yes (see Sampling Inspection Report) ☐ No

CONDITION OF OUTFALL AND EFFLUENT CHARACTERISTICS:

1. Type of outfall: ☑ Shore based ☐ Submerged Diffuser? ☐ Yes ☑ No
2. Are the outfall and supporting structures in good condition? ☑ Yes ☐ No
3. Final Effluent (evidence of following problems): ☐ Sludge bar ☐ Grease ☐ Turbid effluent ☐ Visible foam ☐ Unusual color ☐ Oil sheen
4. Is there a visible effluent plume in the receiving stream? ☐ Yes ☑ No
5. Receiving stream: ☑ No observed problems ☐ Indication of problems (explain below)

Comments: No process or stormwater discharge at the time of inspection.

REQUIRED CORRECTIVE ACTIONS:

1. None.

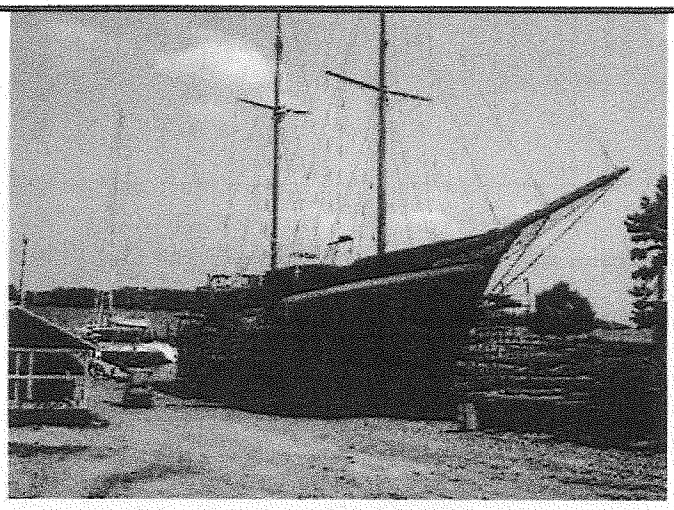
NOTES and COMMENTS:

1. The sedimentation basin and surrounding area are heavily vegetated and sample collection at Outfall 002 may be difficult. Controlling the vegetation may facilitate sampling this area.
2. As discussed during the inspection, please remember to inspect and maintain documentation of monthly sedimentation checks at Outfall 002.
3. As discussed during the inspection, please remember to cleanup any debris associated with industrial activity from the operational railways before the end of the work day or before high tide.
4. Please continue to gauge and monitor the efficiency of the sump at the pressure wash station (Outfall 001).

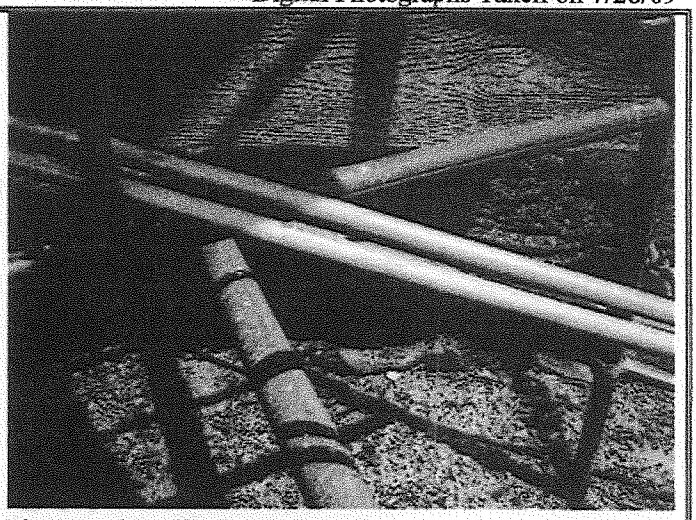
VA DEQ Wastewater Facility Inspection Report

Permit #	VA0091294

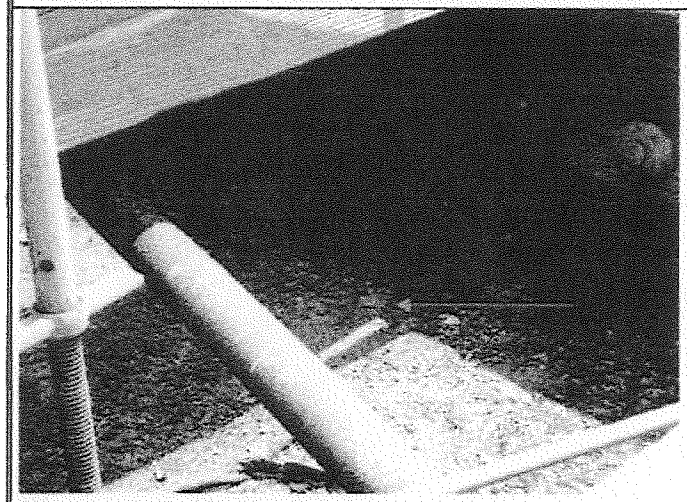
Digital Photographs Taken on 7/28/09



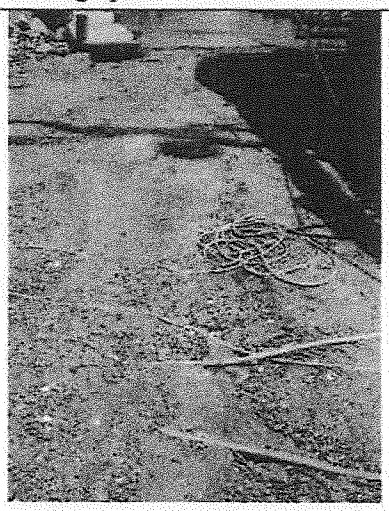
Photograph 1: Overview of Outfall 009 railway



Photograph 2: Cloth between rails

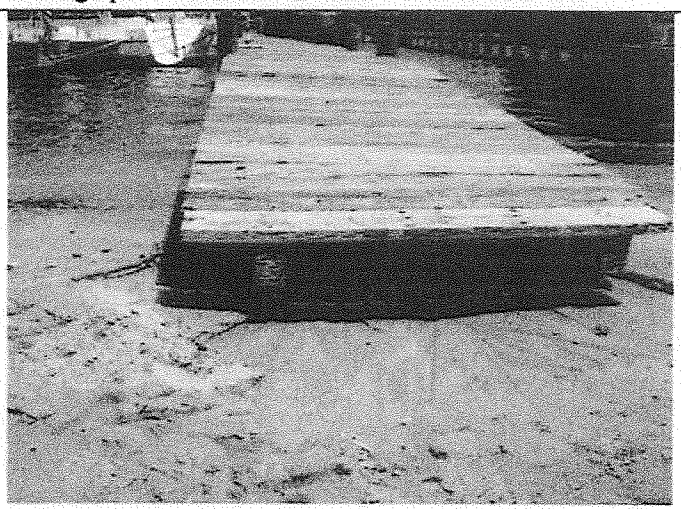


Photograph 3: Solids on cloth between rails



Photograph 4: Evidence of water flow at Outfall 909

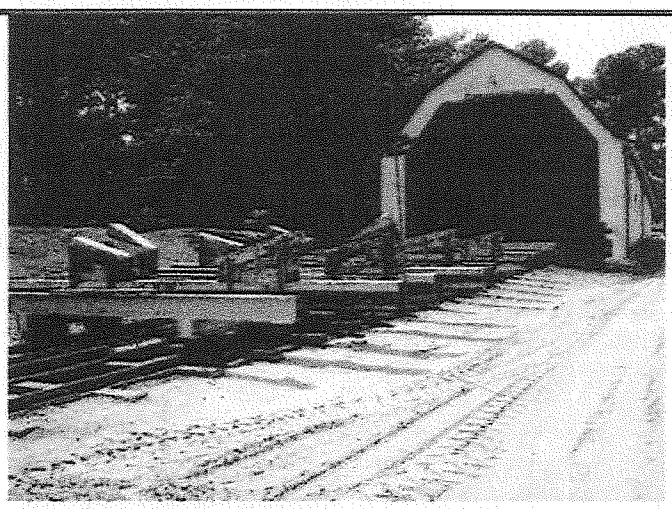
Photograph 5: Wood shavings on ground at Outfall 009



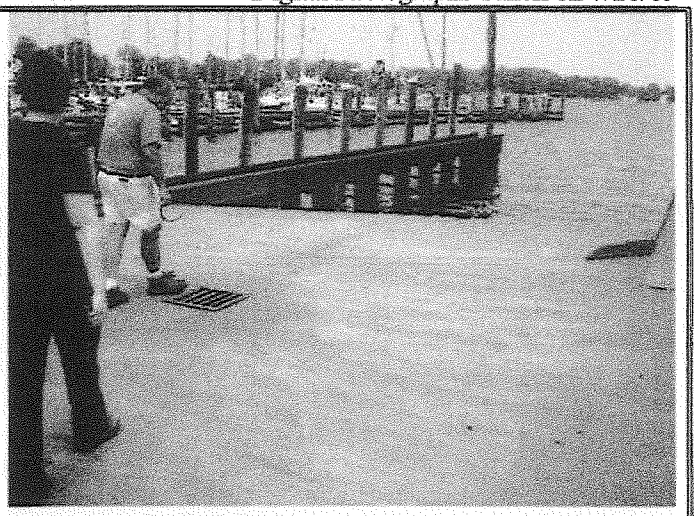
Photograph 6: Gully in the vicinity of 009 railway (Outfall 003 wooden pier in background)

Permit #	VA0091294

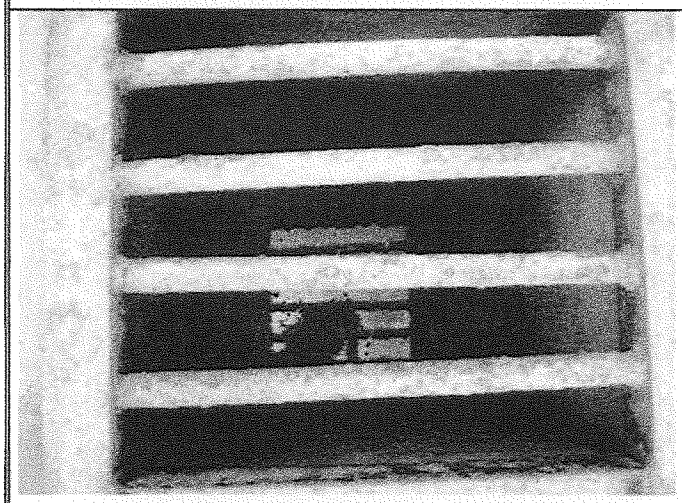
Digital Photographs Taken on 7/28/09



Photograph 7: Outfall 008 railway (vacant)

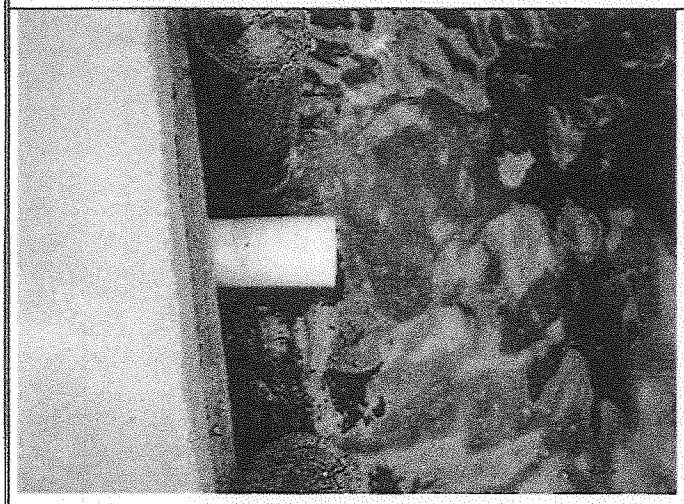


Photograph 8: Outfall 001 overview

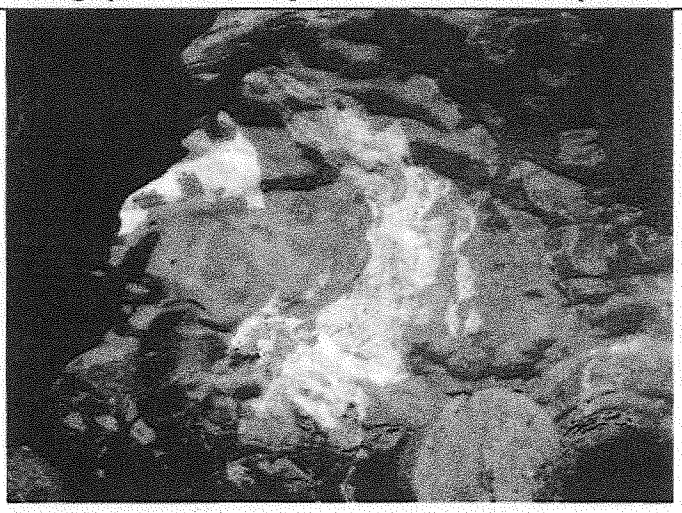


Photograph 9: Sump at Outfall 001

Photograph 10: Paint chips next to entrance to sump



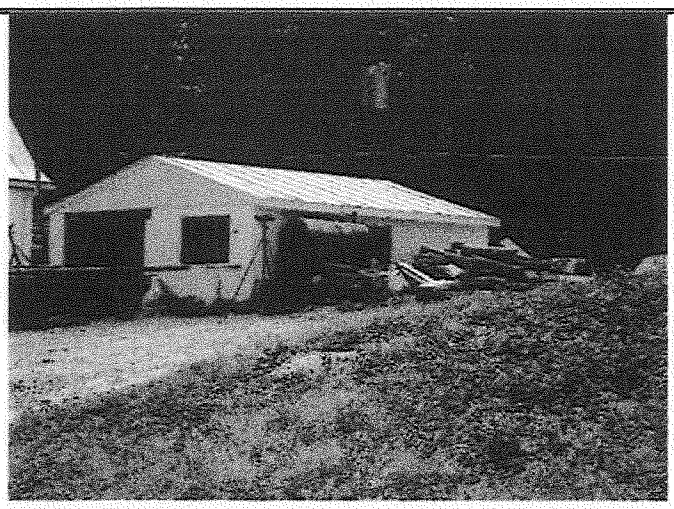
Photograph 11: Outfall 001 discharge pipe



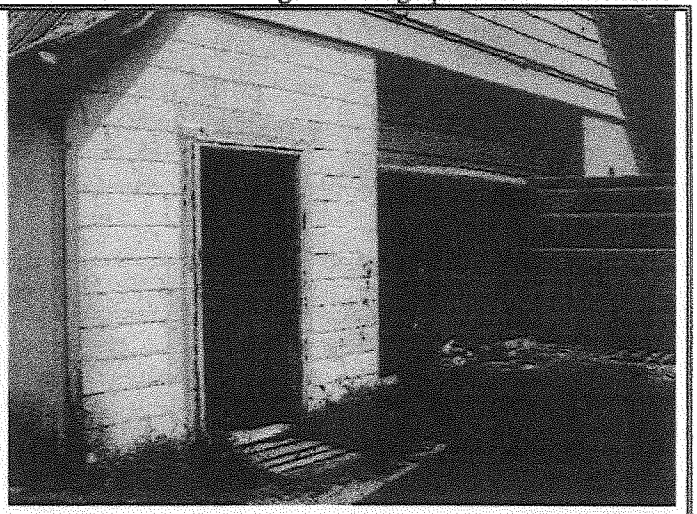
Photograph 12: Oily sheen adjacent to Outfall 007 (undetermined source)

Permit #	VA0091294

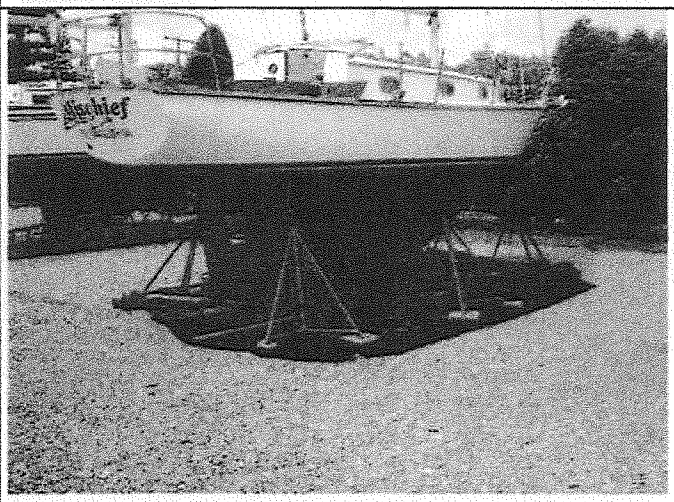
Digital Photographs Taken on 7/28/09



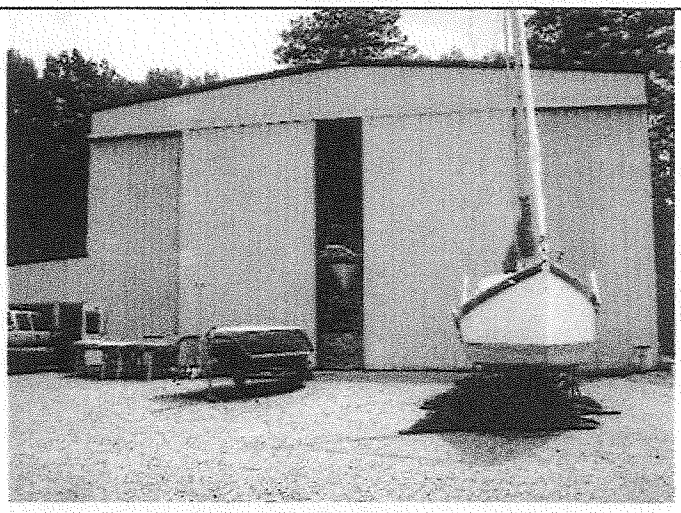
Photograph 13: Used oil tank at Outfall 009 railway 'donkey shed'



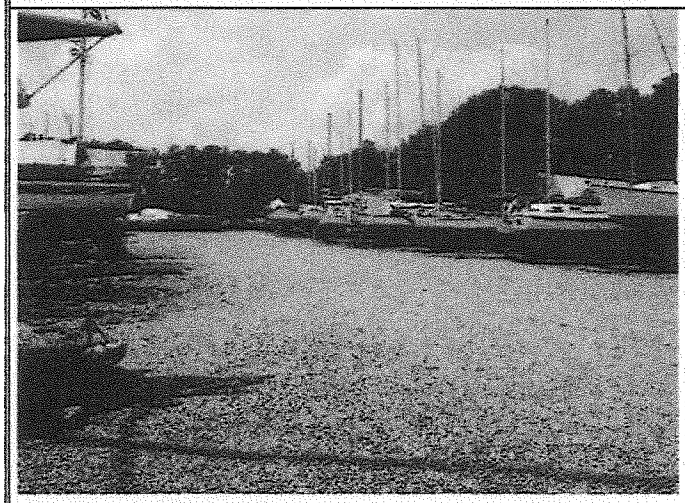
Photograph 14: Maintenance shop



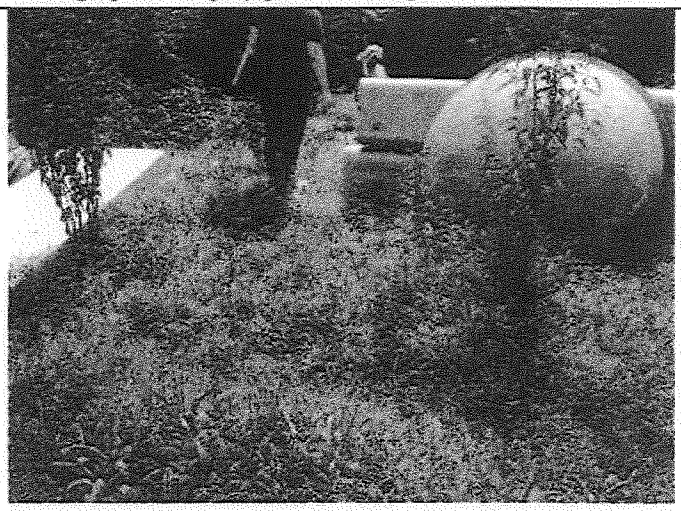
Photograph 15: Cloth under vessel in the small boat yard



Photograph 16: Spray paint building



Photograph 17: Small boat storage yard overview

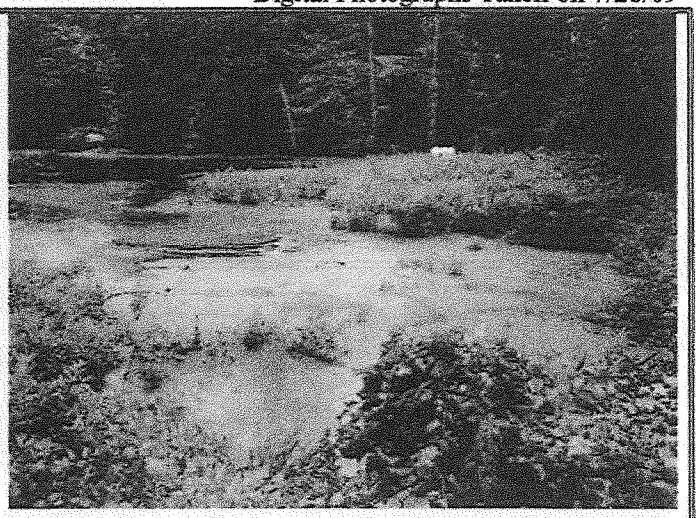


Photograph 18: Berm on southern portion of small boat yard

Permit #	VA0091294

Digital Photographs Taken on 7/28/09

Photograph 19: Outfall 002 sedimentation basin



Photograph 20: Outfall 002 receiving stream (pond)

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
LABORATORY INSPECTION REPORT

Form Updated 10/4/2001

FACILITY NO:	INSPECTION DATE:	PREVIOUS INSP. DATE:	PREVIOUS EVALUATION:	TIME SPENT:
VA0091294	July 28, 2009	N/A	N/A	10 hours w/ travel & report

NAME/ADDRESS OF FACILITY:	FACILITY CLASS:	FACILITY TYPE:	UNANNOUNCED INSPECTION?
Chesapeake Marine Railway, LLC 548 Deagles Rd. Deltaville, VA 23043	( ) MAJOR ( ) MINOR (X) SMALL ( ) VPA/NDC	( ) MUNICIPAL (X) INDUSTRIAL ( ) FEDERAL ( ) COMMERCIAL LAB	( ) YES (X) NO **FY-SCHEDULED INSPECTION?** (X) YES ( ) NO

INSPECTOR(S):	REVIEWERS:	PRESENT AT INSPECTION:
Meredith R. Williams MRW 8/7/09	KRW 8/12/09	Jon Farinholt (CMR), Heather Horne (DEQ)

LABORATORY EVALUATION	DEFICIENCIES? Yes	No
LABORATORY RECORDS	X	
GENERAL SAMPLING & ANALYSIS	X	
LABORATORY EQUIPMENT		X
pH ANALYSIS PROCEDURES	X	

QUALITY ASSURANCE/QUALITY CONTROL

Y/N	QUALITY ASSURANCE METHOD	PARAMETERS	FREQUENCY
N	REPLICATE SAMPLES		
N	SPIKED SAMPLES		
N	STANDARD SAMPLES		
N	SPLIT SAMPLES		
N	SAMPLE BLANKS		
N	OTHER		
N	EPA-DMR PE SAMPLES? DMRQA??	RATING: ( ) No Deficiency ( ) Deficiency ( ) NA	
N	QC SAMPLES PROVIDED?	RATING: ( ) No Deficiency ( ) Deficiency ( ) NA	

COPIES TO: (X) DEQ - PRO; (X) OWPCA; (X) OWNER; ( ) EPA-Region III; (X) Other:

FACILITY #: VA0091294

LABORATORY RECORDS SECTION

LABORATORY RECORDS INCLUDE THE FOLLOWING:

NO	SAMPLING DATE	NO	ANALYSIS DATE	N/A	CONT MONITORING CHART
NO	SAMPLING TIME	NO	ANALYSIS TIME	NO	INSTRUMENT CALIBRATION
NO	SAMPLE LOCATION	NO	TEST METHOD	Need	INSTRUMENT MAINTENANCE
				X	CERTIFICATE OF ANALYSIS

WRITTEN INSTRUCTIONS INCLUDE THE FOLLOWING:

Need	SAMPLING SCHEDULES	Need	CALCULATIONS	Need	ANALYSIS PROCEDURES

	YES	NO	N/A
DO ALL ANALYSTS INITIAL THEIR WORK?		X	
DO BENCH SHEETS INCLUDE ALL INFORMATION NECESSARY TO DETERMINE RESULTS?		X	
IS THE DMR COMPLETE AND CORRECT? MONTH(S) REVIEWED: **April-June 2009 monitoring period**		X	
ARE ALL MONITORING VALUES REQUIRED BY THE PERMIT REPORTED?		X	

GENERAL SAMPLING AND ANALYSIS SECTION

	YES	NO	N/A
ARE SAMPLE LOCATION(S) ACCORDING TO PERMIT REQUIREMENTS?	X		
ARE SAMPLE COLLECTION PROCEDURES APPROPRIATE?	X		
IS SAMPLE EQUIPMENT CONDITION ADEQUATE?	X		
IS FLOW MEASUREMENT ACCORDING TO PERMIT REQUIREMENTS?	X		
ARE COMPOSITE SAMPLES REPRESENTATIVE OF FLOW?			X
ARE SAMPLE HOLDING TIMES AND PRESERVATION ADEQUATE?		X	
IF ANALYSIS IS PERFORMED AT ANOTHER LOCATION, ARE SHIPPING PROCEDURES ADEQUATE? LIST PARAMETERS AND NAME & ADDRESS OF LAB: **J.R. Reed & Assoc. Newport News, VA - TSS, COD, TPH, Dissolved Pb, Cu, Zn, Toxicity**	X		

LABORATORY EQUIPMENT SECTION

	YES	NO	N/A
IS LABORATORY EQUIPMENT IN PROPER OPERATING RANGE?	X		
ARE ANNUAL THERMOMETER CALIBRATION(S) ADEQUATE?	X		
IS THE LABORATORY GRADE WATER SUPPLY ADEQUATE?			X
ARE ANALYTICAL BALANCE(S) ADEQUATE?			X

LABORATORY INSPECTION REPORT SUMMARY

FACILITY NAME:	FACILITY NO:	INSPECTION DATE:
Chesapeake Marine Railway, LLC	VA0091294	July 28, 2009
OVERALL LABORATORY EVALUATION:	**(X) Deficiencies** **( ) No Deficiencies**	

LABORATORY RECORDS

Compliance Recommendations:

1. The Operations & Maintenance Manual must include sampling schedules and procedures, pH analysis procedures and any calculations used for determining flow.

2. Attachment A of the permit must be completed and submitted with the BMP forms.

The April-June 2009 DMRs were reviewed and the following corrective actions must be implemented:

3. pH calibration and sampling records must be maintained and include the following information: method number, date, analysts' initials, buffer readings and temperatures, sample readings and temperature and sample and analysis times. You may use the attached pH Log sheet to record this required information.

4. Please refer to the highlighted example DMR that was provided during the inspection. Results must be reported in the correct spaces on the DMR.

5. The 'Frequency of Analysis' and 'Sample Type' columns must be completed on the DMR.

6. Flow must be reported in million gallons per day (MGD).

7. When reporting the pH result, report only the number that the meter displays after it has stabilized. If you only take one pH sample during the monitoring period, the same number is reported as the minimum and maximum on the DMR.

8. The COD result reported on the outfall 008 DMR should be reported as <10 mg/L, not 10 mg/L.

9. To avoid confusion, if there was not a discharge (process water or stormwater) during the monitoring period, write "No Discharge" on the DMR.

10. You will notice on the Certificate of Analysis that TPH is reported as TPH-DRO and TPH-GRO. This is Diesel Range Organics and Gasoline Range Organics. Follow this guidance for reporting TPH on the DMR:
    a) If there is a hit on one fraction and a "less than" value on the other, treat the "less than" as zero, and report the concentration of the hit. Example: If the value for DRO was 1.1 ppm and the GRO was <0.5 ppm. The reported value for TPH should be 1.1 ppm.

    b) If there are hits on both fractions (DRO and GRO), add them together and report the sum. Example: DRO is 0.9 ppm and GRO is 0.7 ppm, then TPH is reported as 1.6 ppm.

    c) If both are "less thans", then report the TPH as less than the sum of the two reporting limits (QLs). Example: GRO is <0.5 ppm and DRO is <0.5 ppm, TPH would be <1.0 ppm.

    Therefore, using the above guidance, TPH for outfalls 001 and 008 should be reported as <1.0 mg/L.

11. Dissolved metals are required to be reported in micrograms/liter (ug/L). The laboratory reports these results in milligrams/liter (mg/L); therefore, the results must be converted to ug/L when reporting on the DMR. To convert the results, multiply the mg/L result by 1,000 to get ug/L. For example, the results for outfall 001 should be reported as follows:
    Dissolved Lead = <QL ug/L*
    Dissolved Copper = 72 ug/L
    Dissolved Zinc = 20 ug/L
    * Note: The permit specified Quantification Level (QL) for dissolved lead is 48 ug/L (see Part I, page 12 of 48 in the permit); therefore, any dissolved lead result less than 48 ug/L should be reported on the DMR as <QL.

LABORATORY INSPECTION REPORT SUMMARY CONTINUED

FACILITY NAME:	FACILITY NO:	INSPECTION DATE:
Chesapeake Marine Railway, LLC	VA0091294	July 28, 2009

GENERAL SAMPLING AND ANALYSIS

Required Corrective Actions:

1. The pH sample and analysis times are not documented; therefore, the holding time cannot be verified. Samples are required to be analyzed within 15 minutes of collection. Documentation is required to show that the holding time is met. You may use the attached pH log sheet to satisfy this requirement.

LABORATORY EQUIPMENT

Note: The thermistor in the pH meter must be verified annually using an NIST certified thermometer. Your contract laboratory can assist you with this procedure.

INDIVIDUAL PARAMETERS

Required Corrective Actions:

pH Analysis Procedures

1. An initial demonstration of capability (IDC) must be performed. Analyze 4 samples of a known pH. Use a different lot/manufacturer than the buffers used to calibrate the meter. Recovery for each of the 4 samples must be +/- 0.1 SU of the known concentration of the buffer. This is a one-time test to be completed by each person who may analyze a pH sample. You may use the attached IDC sheet to record the results.
2. After calibration, read the buffer 7 as a check sample to verify calibration is correct. This check must be documented. Agreement should be with +/- 0.1 SU.
3. The temperature of the sample and each buffer must be recorded.
4. Refer to #3 in the Laboratory Records section above for a list of required documentation.

NOTE: The buffer 10 expires in August 2009.

COMMENTS

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Road Glen Allen, VA 23060 **804/527-5020**

Memo to: File
From: D. Mosca
Date: May 16, 2002
Re: Deagle's Boatyard Site Visit

I visited Deagle's Boatyard with Bruce Pollock of the Air Division on this date for the purpose of observing areas of discharge in order to recommend a permitting route which would enable them to come into compliance. I met with owners Russell and Janie Ruark, who lease the facility from E. Deagle. Mr. Deagle retained ownership of several piers and a boathouse. I informed the Ruarks that I would be back in touch with them concerning the appropriate permit forms to complete.

This facility is located on Fishing Bay, in Deltaville. Approximately 26 employees work at the facility 5 days per week. Two septic fields handle sewage. Boats and engines are repaired by the facility employees, and by owners who store their boats out of the water over the winter in the parking lot. In preparation for the season, boats may be sanded and repainted by their owners. Water spigots are provided along the fence. Off of this parking lot is a bermed stormwater drainage area, which drains to a 5-6 ft deep earthen pool which has an outlet to Fishing Bay

Pressure washing is performed over a concrete septic tank which concentrates any solids, while allowing the water to run out into the Bay. An average figure is about 7 boats per day during the summer months. The septic tank is sunk into a concrete pier over the water.

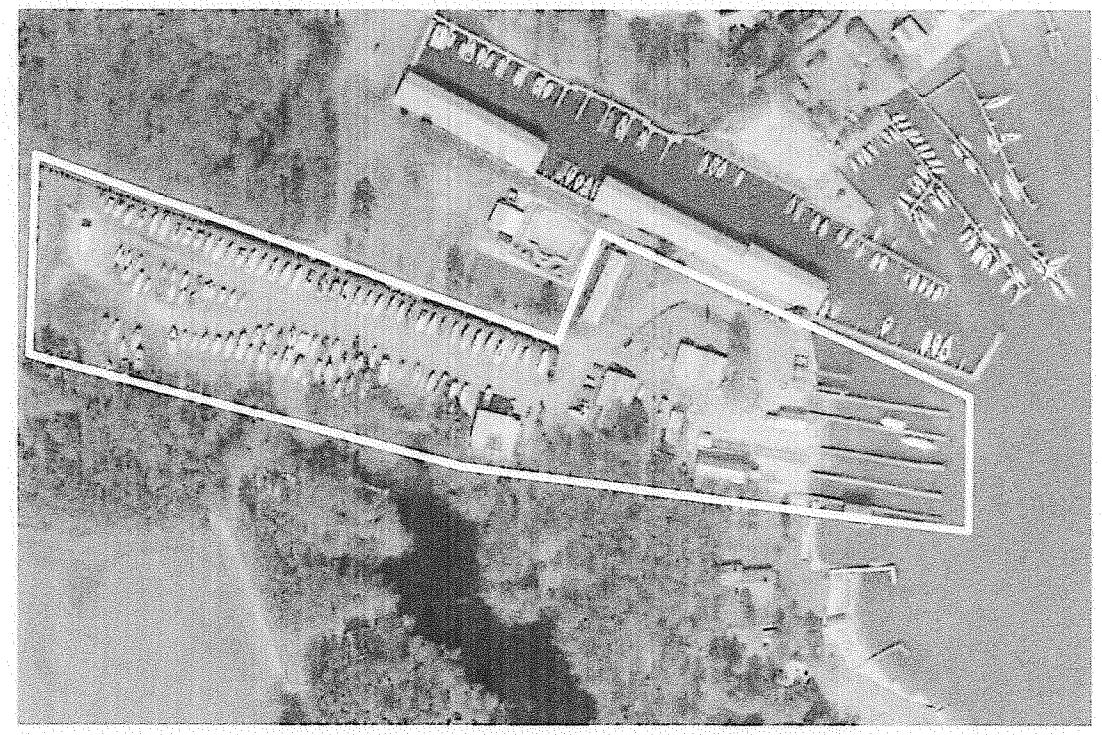
In addition, this facility has 5 piers and 3 railways. One of the railways is abandoned and not in use. Boats are pulled up on the railways to be refurbished. Sand blasting is contracted out.

Small 10 ft. fiberglass dinghy boats are also constructed and solvents are used in this process. However, they appear to be kept under roof, in a new building constructed for this process.

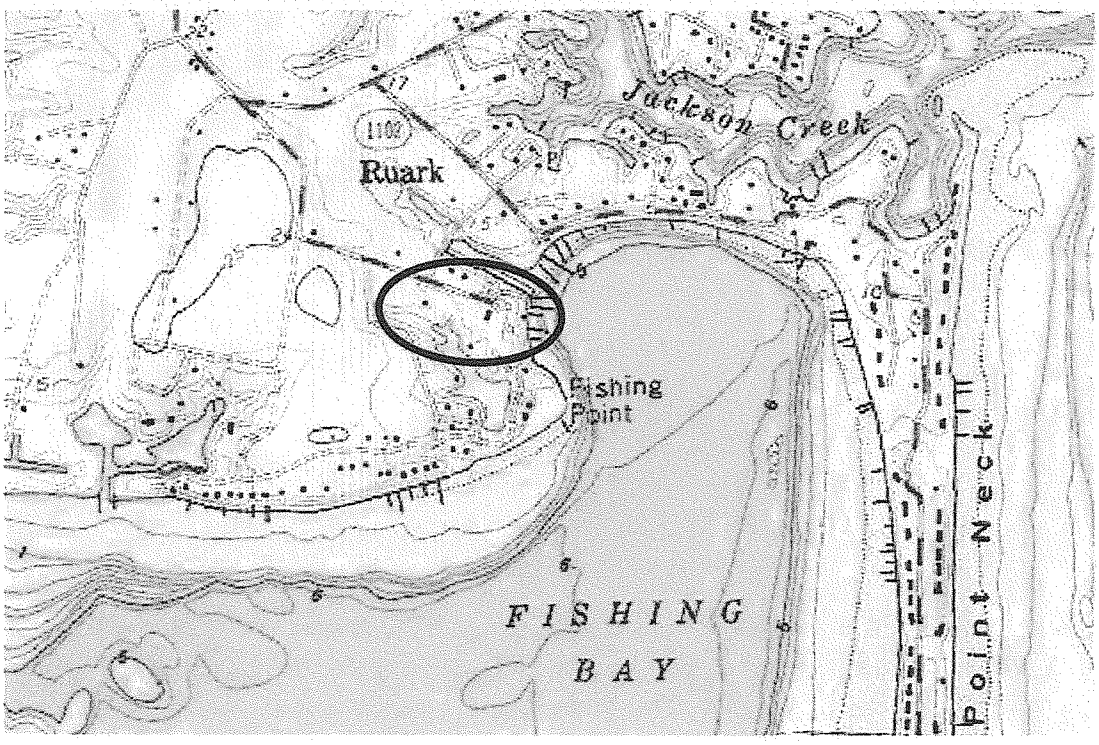
ATTACHMENT 2

DISCHARGE LOCATION/TOPOGRAPHIC MAP

Aerial Image of Chesapeake Marine Railway (Images by DEQ's GIS Map Viewer)

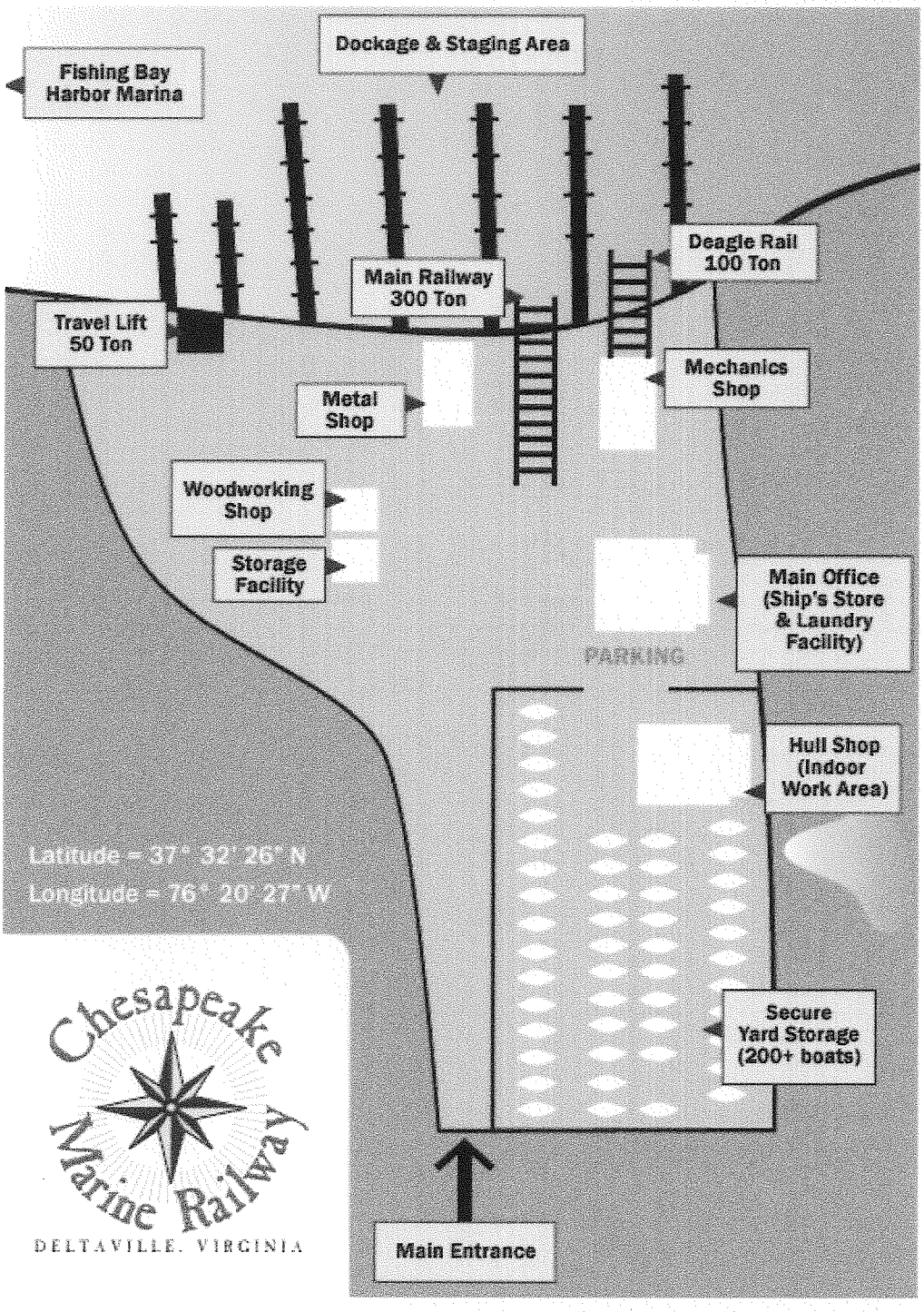


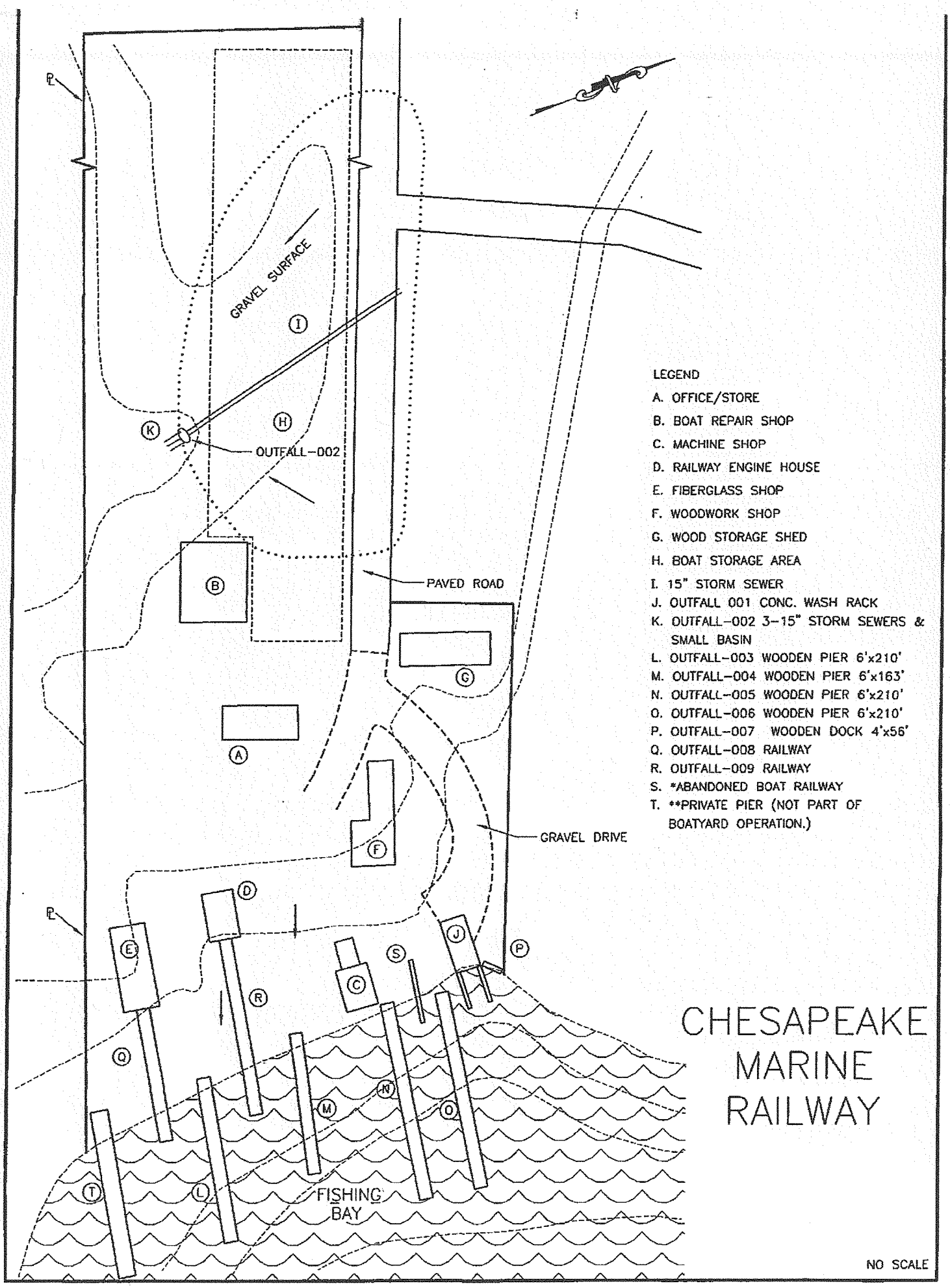
Topographic Map of Fishing Bay

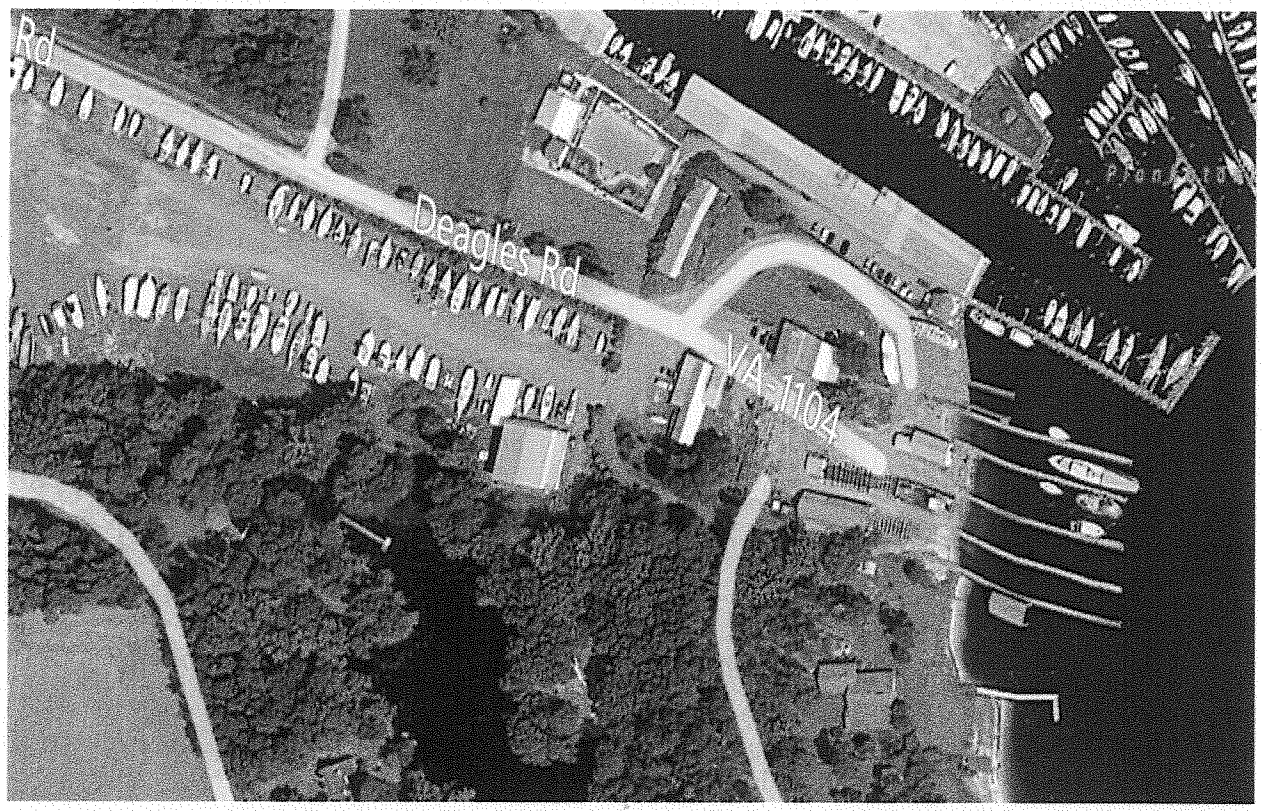


ATTACHMENT 3

SCHEMATIC/PLANS & SPECS/SITE MAP/ WATER BALANCE


Dockage & Staging Area
Fishing Bay Harbor Marina
Deagle Rail 100 Ton
Main Railway 300 Ton
Travel Lift 50 Ton
Mechanics Shop
Metal Shop
Woodworking Shop
Storage Facility
Main Office (Ship's Store & Laundry Facility)
PARKING
Hull Shop (Indoor Work Area)
Latitude = 37° 32' 26" N
Longitude = 76° 20' 27" W
Secure Yard Storage (200+ boats)
Chesapeake Marine Railway
DELTAVILLE, VIRGINIA
Main Entrance


GRAVEL SURFACE
OUTFALL-002
PAVED ROAD
GRAVEL DRIVE
FISHING BAY
LEGEND
A. OFFICE/STORE
B. BOAT REPAIR SHOP
C. MACHINE SHOP
D. RAILWAY ENGINE HOUSE
E. FIBERGLASS SHOP
F. WOODWORK SHOP
G. WOOD STORAGE SHED
H. BOAT STORAGE AREA
I. 15" STORM SEWER
J. OUTFALL 001 CONC. WASH RACK
K. OUTFALL-002 3-15" STORM SEWERS & SMALL BASIN
L. OUTFALL-003 WOODEN PIER 6'x210'
M. OUTFALL-004 WOODEN PIER 6'x163'
N. OUTFALL-005 WOODEN PIER 6'x210'
O. OUTFALL-006 WOODEN PIER 6'x210'
P. OUTFALL-007 WOODEN DOCK 4'x56'
Q. OUTFALL-008 RAILWAY
R. OUTFALL-009 RAILWAY
S. *ABANDONED BOAT RAILWAY
T. **PRIVATE PIER (NOT PART OF BOATYARD OPERATION.)
CHESAPEAKE MARINE RAILWAY
NO SCALE


Rd
Deagles Rd
VA-1104

ATTACHMENT 4

TABLE I - DISCHARGE/OUTFALL DESCRIPTION

ATTACHMENT 4

TABLE I -NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
001 and 101 (NEW)	76°20'27" W 37°32'27" N and 76°20'27.5" W 37°32'28" N	**001** - Location of travel-lift haul system used to remove vessels from the water for storage, repair or maintenance activities. During current permit term, applicant sealed final discharge pipe at this location dedicated to process wastewater discharges from concrete settling chamber at this point source location. As a result, that outfall is now associated with storm water runoff from the concrete pad associated with the travel-lift activity. **101** - nearby upland location where vessels are now rinsed by pressure washing prior to later work being performed. At this time, final process WW not collected but allowed to fall onto underlying soils.	**001** - The applicant uses suitable and appropriate best management practices (BMP) for all industrial activities related to vessel repair and maintenance. Applicant noted (9/11/13) that vessel rinsing after initial haul is performed upon gravel surfaces at upland location near concrete pad associated with the travel-lift. This point source location will remain in the permit due to the potential for storm water associated with industrial activities to be generated and released to surface waters unless controlled. **101** - New point source designation for ongoing process WW activities associated with travel-lift vessel haul system. See Attachments 5 and 6.	Discharge pipe sealed, no process wastewater data since 2011
002	76°20'35" W 37°32'27" N	Storm water runoff from industrial activity. This outfall location is that point where runoff from the upland vessel storage/ maintenance area flows to a nearby surface impoundment.	Suitable and appropriate BMPs for all industrial activities related to vessel repair and maintenance at this permitted facility.	No samples No data
008 (100T) 908 (SW)	76°20'27" W 37°32'26" N	Conventional marine railways. Open carriage haul systems to remove vessels from the water for repair/maintenance. Upon haul, vessels are positioned over permeable surface comprised of erodible native soils and gravel. A reasonable potential exists for process wastewaters to be released to surface waters.	Suitable and appropriate BMPs for all industrial activities related to vessel repair and maintenance at this permitted facility. Additional control measures may be used at these locations due to their unique character and potential industrial activities applied at these marine railways.	008: Max flow per vsl = 40 gal. 009: Max flow per vsl = 400 gal.
009 (300T) 909 (SW)	76°20'27" W 37°32'26" N			
003-007 & 010 **(delete from permit)**	various facility piers	These outfalls represent piers at the facility where no Part I.A. monitoring is performed and no potential for wastewater discharges known to exist.	Suitable and appropriate (BMPs) for all industrial activities related to vessel repair and maintenance at these locations.	No samples No data

(1) List operations contributing to flow; (2) Give brief description, unit by unit; and
(3) Give maximum 30-day average flow for industry & design flow for municipal

ATTACHMENT 5

TABLE II - EFFLUENT MONITORING/LIMITATIONS

ATTACHMENT 5
TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

Part I.A.1.

OUTFALL NUMBER: 001

OUTFALL DESCRIPTION: Storm water runoff from industrial activities where chemical monitoring is required.

SIC CODE: 3732

Effluent Monitoring and Limitations from reissuance to expiration.

PARAMETER & UNITS	STORM CATEGORY 1-29 or BPJ	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS [a] [b]	
		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MG)	C	NA	NL	1/6 Months [c]	Estimate [d]
pH (S.U.)	C	6.0	9.0	1/6 Months [c]	Grab
Total Suspended Solids (mg/l) [e][f]	C	NA	NL	1/6 Months [c]	Grab
Total Kjeldahl Nitrogen (mg/l) [f]	C	NA	NL	1/6 Months	Grab
Nitrite plus Nitrate (mg/l) [f]	C	NA	NL	1/6 Months	Grab
Total Nitrogen (mg/l) [f] [g]	C	NA	NL	1/6 Months	Calculate
Total Phosphorus (mg/l) [f]	C	NA	NL	1/6 Months	Grab
Dissolved Copper (ug/l) [e]	C	NA	NL	1/Year	Grab
Dissolved Zinc (ug/l) [e]	C	NA	NL	1/Year	Grab

NA = Not Applicable; NL = No limitation, however, reporting is required.

1/Year = Between January 1 and December 31.

1/6 Months = Defined as: 1st Half (January 1-June 30); 2nd Half (July 1-December 31)

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Part I.D.1.b.(2) regarding development of protocols and procedures for consistent and representative storm water runoff sampling. See Part I.D.1.b.(6) pertaining to when sampling is to begin at this location.

[b] See Part I.D.1. for additional storm water sampling and reporting requirements. Storm event sampling for this outfall is subject to the specified storm event monitoring requirements (measurable storm event; 72 hours separation; storm event duration; rainfall measurements). All other requirements under Part I.D. shall apply.

[c] Upon completion of monitoring required by Part I.B.10. of this permit, the monitoring frequency for flow, pH, and total suspended solids shall be reduced to once per year (1/Year), for the remaining term of this permit.

[d] Estimate the total volume of the discharge during the storm event from which samples were taken.

[e] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.

ATTACHMENT 5
TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

OUTFALL NUMBER: 001

OUTFALL DESCRIPTION: Storm water runoff from industrial activities where chemical monitoring is required.

SIC CODE: 3732

[f] See Part I.B.10. for additional information, calculations, reporting, and other requirements pertaining to total Kjeldahl nitrogen, nitrite+nitrate, total nitrogen, total phosphorus, and total suspended solids. Monitoring of total suspended solids shall continue throughout the entire term of this permit [Part I.B.10.a.(3)].

[g] Total nitrogen, which is the sum of TKN and nitrite+nitrate, shall be derived from the results of those tests.

Part I.A.2. There shall be no discharge of floating solids, visible foam, or discolored runoff in other than trace amounts

The basis for the limitations codes are:

A. Technology (e.g., Federal Effluent Guidelines)
B. Water Quality Standards (9 VAC 25-260 et. seq.)
C. Best Professional Judgment

Additional Discussion

Non-significant dischargers are subject to aggregate wasteload allocations for total nitrogen (TN), total phosphorous (TP) and sediments (TSS) under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TKN, NO2+NO3, TN, TP, and TSS are required in order to verify the previously un-quantified aggregate wasteload allocations. Monitoring shall occur once per 6-months for a two year period, beginning at permit reissuance. Once the two-year schedule of data gathering concludes, TSS monitoring shall continue until permit expiration in order to verify applicant's imposition and maintenance of BMPs and other control measures required by the permit.

ATTACHMENT 5
TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

Part I.A.3.

OUTFALL NUMBER: 101

OUTFALL DESCRIPTION: Process wastewater discharges associated with industrial activities performed at the designated location of hull preparation activities associated with the travel-lift vessel haul system. [a]

SIC CODES: 3732

(x) Final Limits ( ) Interim Limits Effective Dates - From: REISSUANCE To: EXPIRATION

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS [b] [c] [d]	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
SEE PART I.B.7.a.(8) REGARDING SPECIFIC OPERATIONAL CONTROLS AND BEST MANAGEMENT PRACTICES (BMP) FOR COLLECTION AND DISPOSAL OF SOLIDS AND WASTES RESULTING FROM HULL PREPARATION ACTIVITIES AT THE LOCATION DESIGNATED BELOW (e.g., PAINT CHIPS, BIOLOGICAL GROWTH, RUST, ETC.). SEE PARTS I.B.8.e.(1)(a) AND I.B.8.e.(1)(c) FOR ACTIONS NECESSARY TO DESIGNATE AND REPORT TO THE DEQ'S PIEDMONT REGIONAL OFFICE THE SPECIFIC LOCATION(S) WHERE PROCESS WASTEWATER GENERATING ACTIVITIES WILL TAKE PLACE, ACROSS THE TERM OF THIS PERMIT, AND PART I.B.8.e.(2) FOR THE DUE DATE OF THE REPORT'S SUBMISSION. SEE PART I.B.8.e.(1)(b) PERTAINING TO THE DEVELOPMENT OF ADDITIONAL CONTROL MEASURES OR BMPS SPECIFIC TO MINIMIZING THE VOLUME(S) OF PROCESS WASTEWATERS GENERATED AT THIS LOCATION.							

[a] Per Part I.B.8.a., process wastewater related to hull work shall be any water used on a vessel's hull for any purpose regardless of application pressure, including but not limited to the activities of removing marine salts, sediments, marine growth, hull coatings and paint, or other hull, weather deck, or superstructure cleaning activities using water such as preparing those areas for inspection or work (cutting, welding, grinding, etc.)

[b] See Part I.B.8.b. for information pertaining to generation of process wastewaters and the onset of a measurable storm event, and Part I.B.8.c. for information pertaining to the use of detergents, surfactants or other additives.

[c] See Part I.B.8.d. regarding preparation and submission of Process Wastewater Generation, Description, and Management Report (Attachment B).

[d] See Part I.B.9. pertaining to the prohibition of rinsing or removing hull coatings formulated with tributyltin (TBT), at the designated locations under this permit.

Part I.A.4. There shall be no discharge of floating solids, visible foam, or discolored runoff in other than trace amounts

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines);
2. Water Quality Standards (9 VAC 25-260 et. seq.);
3. **Best Professional Judgment**

ATTACHMENT 5
TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

Part I.A.5.

OUTFALL NUMBER: 002

Outfall Description: Storm water runoff from designated upland vessel storage and maintenance location associated with on-site industrial activities, where no monitoring is required.

SIC CODE: 3732

Effluent Monitoring and Limitations from reissuance to expiration.

PARAMETER & UNITS	STORM CATEGORY 1-29 or BPJ	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS [a]	
		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
THIS OUTFALL SHALL CONTAIN STORM WATER RUNOFF ASSOCIATED WITH A REGULATED INDUSTRIAL ACTIVITY WHERE NO CHEMICAL MONITORING OR BIOLOGICAL TOXICITY TESTING ARE REQUIRED, INCLUDING THE QUARTERLY VISUAL EXAMINATIONS OF THE PHYSICAL CHARACTERISTICS OF STORM WATER RUNOFF AS REQUIRED BY PART I.D.1.f. FOR THE TERM OF THIS PERMIT, THE PERMITTEE SHALL PERFORM REGULAR PHYSICAL INSPECTIONS OF THE INDUSTRIAL ACTIVITIES PERFORMED IN THE DRAINAGE AREA(S) ASSOCIATED WITH THIS POINT SOURCE DISCHARGE LOCATION, AS REQUIRED BY PARTS I.B.7.b. [SHIPYARD BEST MANAGEMENT PRACTICES], I.D.3.d. [ANNUAL SITE COMPLIANCE EVALUATION], AND I.D.4.e.(2)(c) [ROUTINE FACILITY INSPECTIONS]. ADEQUATE DOCUMENTATION AND REPORTING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THOSE SAME SECTIONS OF THE PERMIT [PART I.B.7.b. - ATTACHMENT A [QUARTERLY] SHIPYARD BMP COMPLIANCE REPORTING FORM WITH ALL WEEKLY AUDIT CHECKLISTS, AND THE PERMIT'S STORM WATER POLLUTION PREVENTION PLAN - PARTS I.D.3.d. AND I.D.4.e.(2)(c), RESPECTIVELY]. THERE SHALL BE NO DISCHARGE OF PROCESS WASTEWATER FROM THIS OUTFALL. SEE PART I.B.8.a. FOR A DEFINITION OF PROCESS WASTEWATER UNDER THIS PERMIT.					

Part I.A.6. There shall be no discharge of floating solids, visible foam, or discolored runoff in other than trace amounts

The basis for the limitations codes are:

A. Technology (e.g., Federal Effluent Guidelines)
B. Water Quality Standards (9 VAC 25-260 et. seq.)
C. **Best Professional Judgment**

ATTACHMENT 5
TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

Part I.A.7.

OUTFALL NUMBERS: 008, 009

OUTFALL DESCRIPTION: Process wastewater discharges associated with industrial activities performed at and upon conventional marine railway vessel haul systems

SIC CODES: 3732, 4499

(x) Final Limits ( ) Interim Limits Effective Dates - From: REISSUANCE To: EXPIRATION

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS [a]	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NA	NA	NL	1/Year	Estimate [b]
pH (S.U.)	3		NA	6.0	9.0	1/Year	Grab
Total Suspended Solids (mg/l) [c] [d]	3		NA	NA	NL	1/Year	Grab
Total Kjeldahl Nitrogen (mg/l) [d]	3		NA	NA	NL	1/Year	Grab
Nitrite plus Nitrate (mg/l) [d]	3		NA	NA	NL	1/Year	Grab
Total Nitrogen (mg/l) [d] [e]	3		NA	NA	NL	1/Year	Calculate
Total Phosphorus (mg/l) [d]	3		NA	NA	NL	1/Year	Grab
Total Recoverable Copper (µg/l) [c]	3		NA	NA	NL	1/Year	Grab
Total Recoverable Zinc (µg/l) [c]	3		NA	NA	NL	1/Year	Grab

NA = Not Applicable; NL = No limitation, however, reporting is required.

1/Year = Between January 1 and December 31.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

For the purpose of this permit, process wastewater related to hull work shall be any water used on a vessel's hull for any purpose regardless of application pressure, including but not limited to the activities of removing marine salts, sediments, marine growth, hull coatings and paint, or other hull, weather deck, or superstructure cleaning activities using water such as preparing those areas for inspection or work (cutting, welding, grinding, etc.).

ATTACHMENT 5

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL NUMBERS: 008, 009

OUTFALL DESCRIPTION: Process wastewater discharges associated with industrial activities performed at and upon conventional marine railway vessel haul systems

SIC CODES: 3732, 4499

(x) Final Limits ( ) Interim Limits Effective Dates - From: REISSUANCE To: EXPIRATION

[a] See Part I.B.8.e.(2)(a) regarding development of protocols and procedures for consistent and representative wastewater sampling, representative outfalls, and when to begin sampling process wastewaters under this permit.

See Part I.B.9. pertaining to the prohibition of rinsing or removing hull coatings formulated with tributyltin.

[b] Estimate the total volume of wastewater flow for the wastewater generating event from which samples were taken for analyses.

See Part I.B.8.d. regarding preparation and submission of Process Wastewater Generation, Description, and Management Report (Attachment B) for each wastewater generating event at each marine railway, over the term of this permit.

[c] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.

[d] See Part I.B.10. for additional information, calculations, reporting, and other requirements pertaining to total Kjeldahl nitrogen, nitrite + nitrate nitrogen, total nitrogen, total phosphorus, and total suspended solids.

[e] Total nitrogen, which is the sum of TKN and nitrite + nitrate, shall be derived from the results of those tests.

Part I.A.8. There shall be no discharge of floating solids, visible foam, or discolored wastewaters in other than trace amounts.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines);
2. Water Quality Standards (9 VAC 25-260 et. seq.);
3. **Best Professional Judgment**

ATTACHMENT 5
TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

Part I.A.9.

OUTFALL NUMBER: 908 and 909

Outfall Description: Storm water runoff from areas associated with industrial activities performed at and around the site's conventional marine railways, where no monitoring is required.

SIC CODES: 3732, 4499

Effluent Monitoring and Limitations from reissuance to expiration.

PARAMETER & UNITS	STORM CATEGORY 1-29 or BPJ	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS [a]	
		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
THESE OUTFALLS SHALL CONTAIN STORM WATER RUNOFF ASSOCIATED WITH A REGULATED INDUSTRIAL ACTIVITY WHERE NO CHEMICAL MONITORING OR BIOLOGICAL TOXICITY TESTING ARE REQUIRED, INCLUDING THE QUARTERLY VISUAL EXAMINATIONS OF THE PHYSICAL CHARACTERISTICS OF STORM WATER RUNOFF, AS REQUIRED BY PART I.D.1.f. FOR THE TERM OF THIS PERMIT, THE PERMITTEE SHALL PERFORM REGULAR PHYSICAL INSPECTIONS OF THE INDUSTRIAL ACTIVITIES PERFORMED IN THE DRAINAGE AREA(S) ASSOCIATED WITH THESE POINT SOURCE DISCHARGE LOCATIONS, AS REQUIRED BY PARTS I.B.7.b. (SHIPYARD BEST MANAGEMENT PRACTICES), I.D.3.d. (ANNUAL SITE COMPLIANCE EVALUATION), AND I.D.4.e.(2)(c) (ROUTINE FACILITY INSPECTIONS). ADEQUATE DOCUMENTATION AND REPORTING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THOSE SAME SECTIONS OF THE PERMIT (PART I.B.7.b. - ATTACHMENT A [QUARTERLY] SHIPYARD BMP COMPLIANCE REPORTING FORM WITH ALL WEEKLY AUDIT CHECKLISTS, AND THE PERMIT'S STORM WATER POLLUTION PREVENTION PLAN - PARTS I.D.3.d. AND I.D.4.e.(2)(c), RESPECTIVELY). THERE SHALL BE NO DISCHARGE OF PROCESS WASTEWATER FROM THIS OUTFALL. SEE PART I.B.8.a. FOR A DEFINITION OF PROCESS WASTEWATER UNDER THIS PERMIT. SEE PART I.B.8.b. FOR ADDITIONAL REQUIREMENTS PERTAINING TO PROCESS WASTEWATERS GENERATED DURING STORM EVENTS WITH THE POTENTIAL FOR THOSE WASTEWATERS COMMINGLING WITH STORM WATER WITH RESULTING POINT SOURCE DISCHARGE TO SURFACE WATERS.					

Part I.A.10. There shall be no discharge of floating solids, visible foam, or discolored runoff in other than trace amounts

The basis for the limitations codes are:

A. Technology (e.g., Federal Effluent Guidelines)
B. Water Quality Standards (9 VAC 25-260 et. seq.)
C. **Best Professional Judgment**

ATTACHMENT 6

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA/ ANTIDEGRADATION/ANTIBACKSLIDING

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

General Discussion:

Established at its current location in 1910, this industrial facility has been involved with the repair, maintenance, and servicing of coastal and ocean-going commercial fishing and passenger vessels, service craft, and pleasure/recreational vessels since that time.

During 2006, the facility changed ownership (formerly Deagle's Marine Railway) with the site's current operators continuing with vessel repair and maintenance activities as Chesapeake Boat Works, T/A Chesapeake Marine Railway, LLC. The applicant's client base has remained constant with respect to the vessels serviced, repaired, and stored on-site.

Vessels arriving at this location for repair or maintenance activities are moored to facility piers, or removed from the water by one of three vessel haul systems available at this location. Services offered at this site include, but may not be limited to the following:(1)

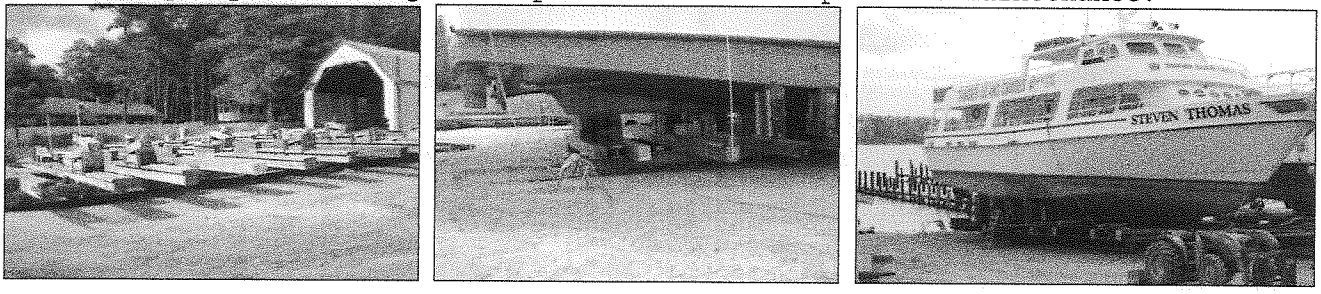
Long- and short-term vessel storage at a designated and secure upland location, repair and maintenance of features associated with the vessel's hull including wetted hull/dry hull/superstructure, removal/preparation/replacement of existing hull coatings that may be formulated with registered aquatic pesticides (anti-foulants/AF coatings), coatings that may contain potentially toxic metals used to preserve metal hulls (anti-corrosives/AC coatings), repairs to vessels fabricated with wood, fiberglass or a combination of materials, repairs and installation of machinery and electrical systems, replacement or repair of running gear (props, shafts, etc.), annual winterization and seasonal preparation for use, emergency vessel hauls in advance of severe weather or hurricanes for secure storage, and other specialized services too numerous to mention.

(1) <http://chesapeakeboatworks.com/services.html, October 18, 2013>

Vessel Haul Systems - Specific Discussion:

To haul vessels from the water for servicing, the applicant operates two conventional marine railways at this site. Each railway is an open cradle with rollers that move on a pair of parallel rails situated on a sloped surface leading from the receiving stream. The cradle is lowered beneath the water and vessels are positioned atop supports on the cradle while the system itself is hauled and lowered via upland machinery and haul chain system to an upland location for later industrial activities. One railway (OF 008) is rated for hauling vessels up to 100 tons (T) and the other (OF 009) rated for vessels of 300T.

Soils underlying each railway are a mix of native soils (sandy in nature) and gravel used to stabilize those locations. Scattered vegetation is present at each railway. Since the two railways are located on surfaces that purposely slope toward the receiving stream, a reasonable potential exists for process wastewaters and potentially contaminated storm water runoff to flow directly to surface waters unless suitable and appropriate best management practices (BMP) are routinely and continually imposed during all aspects of vessel repair and maintenance.



Open carriage conventional marine railway (VaDEQ Inspection Reports CYs 2009 & 2010)

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Vessel Hauling Systems - Specific Discussion: (continued)

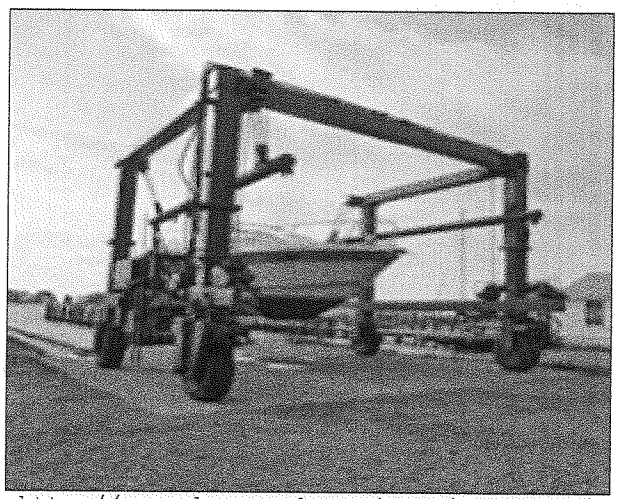
The third haul system at this location is a travel-lift, rated at 50T. Travel-lifts are unique in that the self-powered, open-frame wheeled structure contains adjustable slings upon which vessels are positioned once the slings are affixed beneath the waterborne vessel, prior to the haul.

The travel-lift is pre-positioned atop a set of piers that originate and extend from a concrete pad adjacent to surface waters. Once set, the slings are tightened and raised until the vessel is free of the water and clear of any nearby obstructions. At this point, the travel-lift, with the vessel suspended from the slings, is first driven back to the dedicated concrete pad at this location and visually inspected to ensure vessel stability. Once surveyed at that point, the travel-lift has the capability to move the vessel elsewhere at the facility.

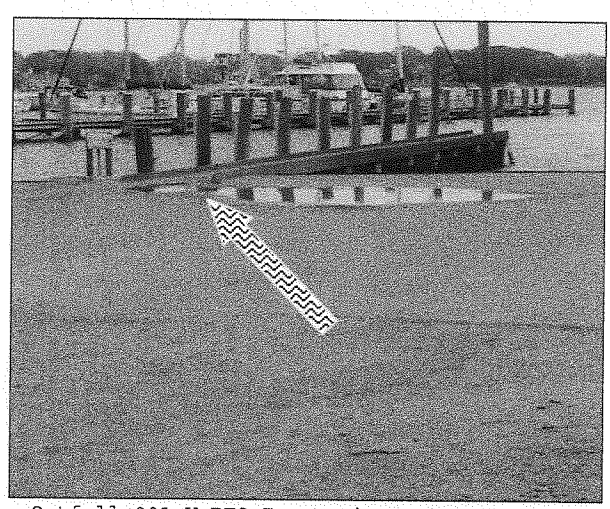
The pad at this point contains a concrete tank, once used for settling process wastewaters from former pressure washing activities at this location. From the tank, the settled wastewaters would flow to Fishing Bay by a single pipe, which was sealed by the applicant, during 2011.

Once the applicant sealed the final discharge pipe, this eliminated direct discharges of defined process wastewaters from this location. However, a reasonable potential remains for potentially contaminated storm water runoff to enter surface waters due to the impervious nature of the concrete pad and its proximity to Fishing Bay. This aspect of the pad appears in a picture noting water having moved toward one corner of the pad, at this location

Although the applicant has sealed off the point source discharge of process wastewaters at this location, the potential remains for contaminated storm water runoff to be generated and released to surface waters unless suitable and appropriate BMPs, and facility-imposed prohibitions on process wastewater discharges at this location, are continually imposed. During the recent site inspection, the concrete pad at this location appeared clean and free of staining and accumulations of contaminants.



http://www.chesapeakemarinerailway.com/



Outfall 001 VaDEQ Inspection Report CY 2009

Outfall 001 will be retained in the permit, but the terms and conditions will note a potential for discharges of storm water associated with industrial activities, with point source discharges of defined process wastewaters prohibited at this location.

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Industrial Activities - General Discussion:

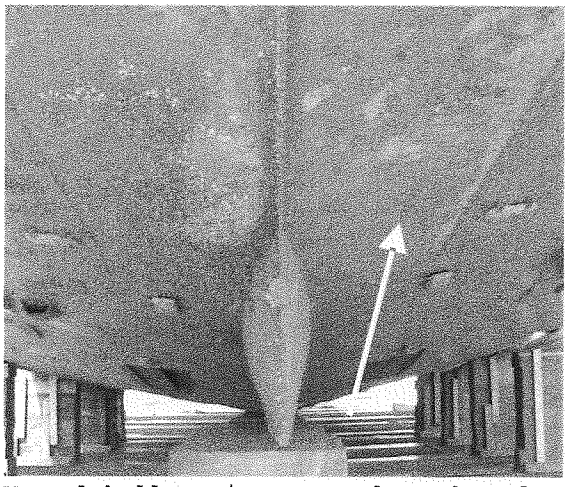
It was noted on EPA Form 1, that the applicant's industrial activity is Boat Building and Repairing (Standard Industrial Classification [SIC] code 3732)[2]. Although not identified on EPA Form 1, and since the applicant operates two conventional marine railways for drydocking vessels, SIC code 4499 also applies to the industrial activities at this location[3].

The EPA, in its Development Document for Proposed Effluent Limitations Guidelines and Standards for the Shipbuilding and Repair Point Source Category, Draft[4] identified industrial activities under SIC codes 3731 and 3732 that could have deleterious impacts on surface waters if pollutants from those industrial sites were discharged to surface waters without sufficient controls being imposed.

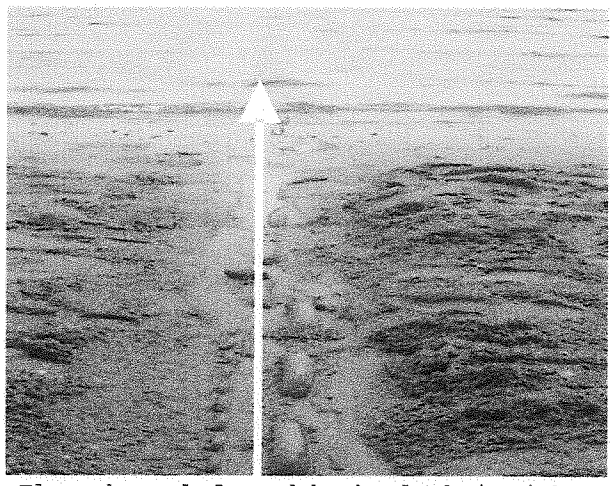
In the late 1980's, the VaDEQ (former SWCB) developed a Best Management Practices Manual For The Shipbuilding and Repair Industry, and used that document as the basis for developing industry-specific BMPs that are placed into individual VPDES permits issued to shipyards and related activities under SIC Codes 3731, 3732, and 4499.

In the application, it was noted that fresh water is used for both initial rinsing (low-pressure) of the hull and later more vigorous application (high-pressure) to remove marine growth and hull coatings. This has been verified by reviewing DMR data, and staff observations, inspection reports, and photographs.

The photographs that follow resulted from a PRO site visit of April 22, 2013, when the exposed wetted hull of a vessel was being prepared for other activities (e.g., AF coating removal/refresh/reapplication, removal/replacement of sacrificial anodes/zinc, inspection, repair, etc.). As evidenced by the photos, it appears that the coating being removed from the hull via pressure washing, was entering surface waters via flow patterns, such as that formed by the railway's haul chain. Although soils beneath the structure are sand and permeable, the potential exists for direct discharges of untreated process wastewaters associated with industrial activities performed at the railways.



Vessel hull noting area cleaned, color of AF coating (blue) and zincs



Flow channel formed by haul chain with color of runoff similar to AF coating

(2) <https://www.osha.gov/pls/imis/sic_manual.display?id=849&tab=description>

(3) <https://www.osha.gov/pls/imis/sic_manual.display?id=922&tab=description>

(4) Development Document for Proposed Effluent Limitations, Guidelines, and Standards for the Shipbuilding and Repair Point Source Category, Draft, EPA 4401-79 076b, 12/79

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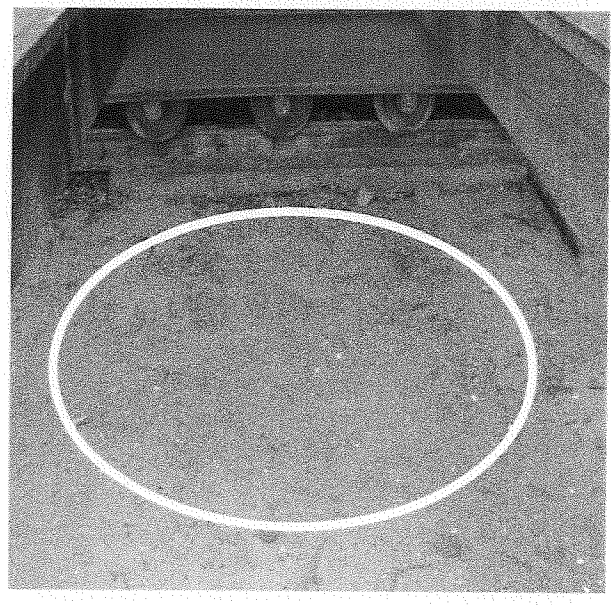
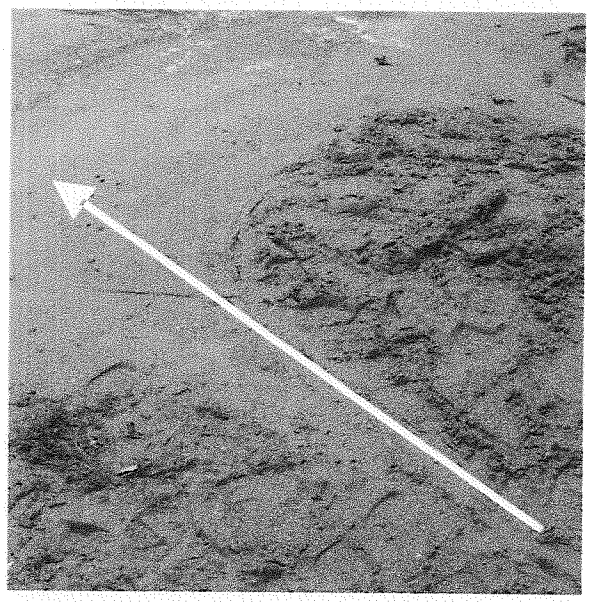
Industrial Activities - General Discussion: (continued)



Area beneath railway carriage noting residues similar in color to AF coating



Additional flow pattern to surface waters similar in appearance to AF coating removed

Industrial Activities - Specific Discussion:

Based on proximity to surface waters, industrial activities performed at sites under SIC codes 3732 and 4499, exhibit a reasonable potential for a variety of probable contaminants to be generated and released if suitable and appropriate controls (BMPs) are not continually imposed. Pollutants expected to be generated at boat yards, verified by DEQ staff during reviews of available discharge monitoring data and on-site facility inspections, may include: [4] [5]

Metals:

The potentially toxic heavy metals copper and zinc are prevalent and routinely documented in process wastewater and storm water discharges from industrial activities under SIC codes 3731/3732/4499, verified by chemical monitoring required by VPDES permits issued to those industrial activities. On occasion, these metals are observed at concentrations that exceed applicable in-stream water quality standards.

Those metals are present in anti-foulant (AF) and anti-corrosive (AC) coatings (removed and applied), piping, sacrificial anodes, wiring, fencing, metallic alloys & other sources/materials typically found at most vessel maintenance facilities. It is expected that if copper and zinc are effectively controlled via BMPs or other similar operational controls, then other metals that may be detected during monitoring should be effectively managed, as well.

Solids:

Based on available information, suspended and settling solids are present in process wastewaters from this and other similar industrial activities under SIC codes 3731/3732/4499. Solids, including pigments from hull coatings, and biological wastes (algae, hydroids, sponges, barnacles, mussels, etc.), originate from initial washing to remove loose hull fouling, muds, slimes and sediments, and subsequent uses of water to remove all or a portion of existing hull coatings.

(5) Virginia Clean Marina Guidebook, VIMS Educational Series No. 49, 2nd Ed., December 2007

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Industrial Activities - Specific Discussion:

Solids: (continued)

If areas underlying the railways are not protected from accumulations of wasted solids and cleaned of waste materials, trash and other debris on a regular and timely basis, flows of water across those industrial areas have a potential to entrain and convey potentially contaminated solids directly to surface waters.

Petroleum, Oils, Lubricants (POL):

Due to the nature of boatyard operations, vehicles and motorized support equipment fueled with gasoline/diesel and lubricated with petroleum products are necessary elements of most industrial activities and can be found throughout such facilities. Vessels being serviced may also contribute petroleum hydrocarbons in the way of residual product(s), lubricants, contaminated bilge and ballast water discharges, and transfer operations involving petroleum products and their wastes and blends. If not controlled at their source(s) or remediated in a timely manner, accidental releases of these materials may impact surface waters.

Acute Biological Toxicity (WET):

Based on information available to DEQ staff, untreated process wastewaters under SIC codes 3731/3732/4499 exhibit a reasonable potential to impart biological toxicity (acute) to the organism(s) tested. For further information and determinations regarding toxicity at this facility, refer to Attachment 8.

Determination - Industrial Activities and Process Wastewaters:

Based on the application filed for reissuance of VA0091294, it has been determined that the applicant will continue to operate a full-service boat and vessel repair and maintenance facility under SIC codes 3732 and 4499. Part of the ongoing industrial activities at the site includes the regular generation of defined process wastewaters at, or in proximity to, the site's three vessel haul locations (outfalls 008, and 009 and the designated location(s) adjacent to the concrete pad associated with the travel-lift).

Industrial Activities, Process Wastewaters and Applicable Regulations:

The following regulatory citations apply to development of VPDES permits with content pertaining to process wastewater discharges from industrial activities:

The State Water Control Law, Title 62.1 (Waters of the State, Ports and Harbors, 2007), addresses waste discharges to state waters:

§ 62.1-44.4 - Control by Commonwealth as to water quality:

(1) No right to continue existing quality degradation in any state water shall exist nor shall such right be or be deemed to have been acquired by virtue of past or future discharge of sewage, industrial wastes or other wastes or other action by any owner. The right and control of the Commonwealth in and over all state waters is hereby expressly reserved and reaffirmed.

§ 62.1-44.5 - Prohibition of waste discharges or other quality alterations of state waters except as authorized by permit; notification required:

a. Except in compliance with a certificate issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances;

2. Excavate in a wetland;

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Industrial Activities, Process Wastewaters and Applicable Regulations: (continued)

3. Otherwise alter the physical, chemical or biological properties of state waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses;

§ 62.1-44.16 - Industrial Wastes

(1) Any owner who erects, constructs, opens, reopens, expands or employs new processes in or operates any establishment from which there is a potential or actual discharge of industrial wastes or other wastes to state waters shall first provide facilities approved by the Board for the treatment or control of such industrial wastes or other wastes. Application for such discharge shall be made to the Board and shall be accompanied by pertinent plans, specifications, maps, and such other relevant information as may be required, in scope and details satisfactory to the Board.

§ 62.1-44.3 - SWCL Definitions

"*Establishment*" means any industrial establishment, mill factory, …… , boat, vessel, and every other industry or plant or works the operation of which produces industrial wastes or other wastes or which may otherwise alter the physical, chemical or biological properties of any state waters.

"*Industrial wastes*" means liquid or other wastes resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource.

"*Other wastes*" means decayed wood, sawdust, shavings, bark, lime, garbage, refuse, ashes, offal, tar, oil, chemicals, and all other substances except industrial wastes and sewage which may cause pollution in state waters.

"*Pollution*" means such alteration of the physical, chemical, or biological properties of any state waters as will or is likely to create a nuisance or render such waters:

(a) harmful or detrimental or injurious to the public health, safety, or welfare or to the health of animals, fish, or aquatic life;

(b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or

(c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses, provided that

(i) an alteration of the physical, chemical, or biological property of state waters or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution but which, in combination with such alteration of or discharge or deposit to state waters by other owners, is sufficient to cause pollution;

(ii) the discharge of untreated sewage by any owner into state waters; and

(iii) contributing to the contravention of standards of water quality duly established by the Board, are "pollution" for the terms and purposes of this chapter.

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Industrial Activities, Process Wastewaters and Applicable Regulations: (continued)

9 VAC 25-31-10[6] Definitions: Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

9 VAC 25-31-220 D. Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.

9 VAC 25-260-5 [7] Definitions: Water quality standards means provisions of state or federal law which consist of a designated use or uses for the waters of the Commonwealth and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the State Water Control Law (§ 62.1-44.2 et seq. of the Code of Virginia) and the federal Clean Water Act (33 USC § 1251 et seq.).

9VAC 25-260-10 A. Designation of uses: All state waters, including wetlands, are designated for the following uses: recreational uses, e.g., swimming and boating; the propagation and growth of a balanced, indigenous population of aquatic life, including game fish, which might reasonably be expected to inhabit them; wildlife; and the production of edible and marketable natural resources, e.g., fish and shellfish.

9 VAC 25-260-20 A. General Criteria: State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant or aquatic life.

Specific substances to be controlled include, but are not limited to; floating debris, oil, scum, and other floating material; toxic substances including those which bio-accumulate; substances that produce color, tastes, turbidity, odors, or settle to form sludge deposits; and substances which nourish undesirable or nuisance aquatic plant life. Effluents which tend to raise the temperature of the receiving stream will also be controlled. Conditions within mixing zones established according to 9 VAC 25-260-20 B. do not violate the provisions of this subsection.

9 VAC 25-260-20 B.1. The Board may use mixing zones concepts in evaluating limitations for Virginia Pollutant Discharge Elimination System permits.

9 VAC 25-260-20 B.5. An allocated impact zone may be allowed within a mixing zone. This zone is that area of initial dilution of the effluent with the receiving water where the concentration of the effluent will be its greatest in the water column. Mixing within these allocated impact zones shall be as quick as practical and shall be sized to prevent lethality to passing and drifting aquatic organisms. The acute aquatic life criteria are not required to be attained in the allocated impact zone.

9 VAC 25-260-20 B.7. No mixing zone shall be used for, or considered as, a substitute for minimum treatment technology required by the Clean Water Act and other applicable state and federal laws.

(6) 9 VAC 25-31, Chapter 31, VPDES Permit Regulation (current as of September 28, 2011)
(7) 9 VAC 25-260 Virginia Water Quality Standards, w/ Amendments eff. 01/06/2011

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Process Wastewater Controls - Best Management Practices:

The current permit allows defined process wastewater(s) to be generated and discharged directly to surface waters from each marine railway (008 & 009) and the location of travel-lift operation (001), although discharges from the travel-lift's concrete pad into the settling tank, thence outfall 001, ceased in 2011.

Based on facility inspection reports, observations by staff, and information presented in the application, the permittee relies primarily on suitable and appropriate BMPs to control point source discharges of process wastewaters, to the extent practicable.

40 CFR 122.2 - EPA defines best management practices:

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

9 VAC 25-31-10 - VPDES Permit Regulation, Best Management Practices:

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to implement the prohibitions listed in 9 VAC 25-31-770 and to prevent or reduce pollution of surface waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Process Wastewater Controls - BMPs Currently Utilized by Applicant:

Information presented in the application, inspection files and site visits have identified the following BMPs in use at the site's travel lift and marine railways to control process wastewater discharges and expected contaminants:

- The applicant sealed the single discharge from the concrete tank set within the concrete surface associated with the travel lift (outfall 001). Based on a specific recommendation by staff of the DEQ's PRO during a past compliance assistance site visit, vessels are moved to an adjacent location where vessels are washed over a designated gravel area further protected with heavy-weight and permeable fabric for debris retention, without a noticeable point source discharge to surface waters observed during a recent site inspection.
- The applicant places heavy-weight permeable fabric beneath the vessel's hull when power-washing at the railways to collect falling debris and wastes for appropriate disposal (AF/AC paint chips, nuisance growth, sediments, etc.).
- Use of proprietary power washing equipment (The Farrow System®) to achieve desired hull condition at optimum application pressure but using a minimal volume of fresh water.
- Frequent clean-up and disposal of process wastes as they accumulate.
- Continued use of BMPs contained in current permit.

Additional BMPs are used for industrial activities performed at the upland vessel storage area(s) including: placement of permeable fabric beneath vessels, hull coatings removed by vacuum sanders and replaced by brush/roller, machinery removal and repairs by qualified facility staff, and other BMPs identified in documents maintained/prepared by the applicant, required by the permit (O&M manual, SWPPP).

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Reasonable Potential Determination – Process Wastewaters at Outfalls 008, and 009:

The application submitted for permit reissuance notes process wastewaters will continue to be generated at outfalls 008 and 009, and in proximity to outfall 001, which is being designated a point of industrial storm water discharge under the reissued permit.

Effluent data collected over the term of current permit at outfalls 008 and 009 are considered representative of the final process wastewaters generated at those locations, with potential for direct release to Fishing Bay.

Available chemical data from outfalls 008 and 009 will be screened against the relevant wasteload allocations (WLA) developed from the acute water quality standards applied to the waters of Fishing Bay.

The VaDEQ developed a program that calculates statistically based limits for VPDES permits as described in DEQ guidance document 93-015, subsequently replaced by DEQ Guidance Memo No. 00-2011; *Guidance on Preparing VPDES Permit Limits*, August 24, 2000, and *Appendix E of EPA's Technical Support Document for the Control of Toxic Materials*, EPA Number 505290001, March 1991.

During the current permit's term, the applicant screened discharges from outfalls 008, and 009 for dissolved copper, dissolved lead, and dissolved zinc, all potentially toxic metals that may be used and found throughout industrial activities under SIC Codes 3732 and 4499.

Since the discharges from these outfalls enter Fishing Bay, the water quality standards associated with salt and transitional waters will be used for determinations in this regard.

Since the receiving stream is of Tier 2 quality[8], 9VAC25-260-30.1 requires that the existing beneficial uses and the quality necessary to protect such existing uses be maintained[9] with permit reissuance.

Since the quality of Tier 2 waters is better than that required by the standards, no significant degradation of the existing quality will be allowed. Based on current and relevant staff guidance, and in order to protect the receiving stream, no more than 25% of the unused assimilative capacity is allocated for toxic criteria for the protection of aquatic life[9]. In this regard, it is necessary to establish antidegradation wasteload allocation (WLA) baselines that include the insignificant allocations and identifies the quality that must be maintained by the current proposal, as well as all future proposals.

To establish the antidegradation WLA baselines for Fishing Bay, VaDEQ developed a computer-based program for use in this regard: MSTRANTI (Version 2b, 2-22-12.xlsx). The results of that modeling is part of this Attachment. Receiving stream characteristics necessary for input to this program are: **1)** 90^{th}% temperature, **2)** 90^{th}% pH, **3)** mean salinity, and **4)** in-stream data available for substances addressed by the WQS'ds. These values appear on the results of the program run.

For the metals copper, lead and zinc, in-stream data are available for Fishing Bay with samples collected July 7, 2009. Where data were reported as less than the tests' quantification levels (QL), one-half of the QL was used for program input.

(8) PRO Flow Frequency Determination/303(d) Status Memorandum, dtd May 12, 2011, VA0091294
(9) Guidance Memo No. 00-2011; Guidance on Preparing VPDES Permit Limits August 24, 2000

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Reasonable Potential Determination – Outfalls 008, and 009: (continued)

Process wastewater discharges from the facility are of low volume, intermittent in frequency and short in duration based on information in the permit application and materials filed by the permittee over the term of the current permit (DMRs, WET test results, BMP reports, etc.).

Based on the short duration and intermittent nature of point source process wastewater discharges, only the acute water quality standards will be employed as part of this determination. Based on the results of the MSRANTI program, the most limiting calculated acute wasteload allocations (WLAa), based on the acute water quality standard values for those metals subject to this review, are:

WLAa Dissolved Copper:	4.4 ug/l
WLAa Dissolved Lead:	120.0 ug/l
WLAa Dissolved Zinc:	43.0 ug/l

Those values will be carried forward for use in the WLA_{40} program, where available effluent data from each outfall were entered for evaluation. The results of the WLA_{40} program run utilizing outfall-specific DMR data and water body-specific WLAs are provided within this attachment to the fact sheet.

Findings – WLA_{40} Program Run Outfalls 008 and 009:

It has been determined that additional controls will be required for discharges of process wastewaters at these outfalls for the metals copper and zinc, as part of the reissued permit.

The apparent need for additional controls at each outfall is based on the expectation that biological toxicity may also result from the concentrations of each metal observed and factored into the model used in this evaluation. However, it is also the case that biological toxicity has not been documented at these outfalls from samples taken in conjunction with chemical monitoring – since 2009 for outfall 008 and since 2010 for outfall 009 (Attachment 8).

Determination – WLA_{40} Program Run Outfalls 008 and 009:

Although results of modeling the wastewater discharges recommend additional controls for reducing the presence of dissolved copper and dissolved zinc at these outfalls subsequent to permit reissuance, the following determinations also apply:

- Additional controls were not recommended for dissolved lead at 008 or 009.
- Currently, no means are available or proposed for either unpaved railway to collect and retain any amount of process wastewaters or storm water runoff for on-site treatment leading to reuse or direct discharge to surface waters, or collection for treatment at an off-site location by contracted service providers.
- The known wastewater discharges are infrequent in occurrence, short in duration, and typically of low volume, based on BMPs currently utilized.
- It is proposed that the reissued permit continue with regular effluent monitoring and impose additional requirements for the applicant to develop enhanced or additional BMPs to effectively eliminate point source discharges of untreated process wastewater discharges to surface waters of Fishing Bay.

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Outfall 001 - General Discussion and Determinations:

The final discharge pipe from the settling tank, part of the concrete pad associated with the site's travel-lift, was sealed in 2011. Based on observations and photos by PRO staff, industrial storm water runoff continues to flow from this point source location to surface waters of Fishing Bay.

In this regard, discharges from outfall 001 will be re-characterized as industrial storm water runoff, with all discharges of permit defined process wastewaters being prohibited.

Process wastewaters, as defined by the permit, are currently ongoing and will continue to be generated at a location recommended by PRO staff, in proximity to the concrete pad. Following permit reissuance, the applicant will be required to formally designate a point, or points, adjacent to the travel-lift's concrete pad where process wastewaters will be generated in a manner where pollutant control measures can be continually imposed.

In summary, the following actions have been taken by the permittee to eliminate process wastewater discharges from the waterfront concrete pad, as outfall 001:

- Applicant sealed the final discharge point (2011) from the impressed concrete settling tank that remains in the concrete pad upon which the travel-lift operates.
- Applicant no longer pressure washes hulls directly atop the concrete pad, but moves vessels to an adjacent and designated gravel area for initial pressure washing following a vessel's haul from surface waters.
- Applicant employs high-pressure/low-volume pressure-washing equipment (The Farrow System®) and places heavy-weight permeable fabric beneath the hull to trap solids and other debris resulting from pressure washing at the upland location.

To incorporate the permittee's actions in this regard into the permit at reissuance, the Part I.A. limitations and monitoring page for outfall 001 will now address industrial storm water runoff from the concrete pad associated with travel-lift operations. As a result, outfall designation 901 will be removed from the permit at reissuance.

Proposed Part I.A.1. Permit Requirements - Outfall 001:

This outfall designation now identifies storm water discharges associated with regulated industrial activities at the point source location (concrete pad) affiliated with operations of the site's travel-lift vessel haul system.

Although storm water discharges from this location were to be monitored as part of the current permit (outfall 901), no discharges were sampled and no chemical data reported for consideration as part of this permit reissuance cycle.

Although the applicant sealed the single pipe leading from the concrete settling tank which is part of the concrete pad associated with the travel-lift activity, a reasonable potential remains for industrial storm water to be discharged to Fishing Bay by sheet flow across this pad to the low point noted in a photograph taken by staff of the DEQ's PRO. The presence of storm water runoff flowing through the low-point noted in the photograph, verified by July 2014 site visit.

In this regard, Part I.A. chemical-specific effluent monitoring will be required to characterize the overall quality of runoff from this point source location of ongoing industrial activities. In part, the proposed monitoring will verify the scope and effectiveness of the applicant's use of BMPs at this location to prevent the loss of pollutants by the erosive flow of storm water and runoff.

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Proposed Part I.A.1. Permit Requirements - Outfall 001: (continued)

The following parameters is proposed for inclusion on the Part I.A. effluent limitation page for this outfall:

Part I.A. Parameters	Rationale/Justification
Flow:	An unlimited parameter reported as millions of gallons per storm event (MG). A permit condition will address the manner in which this information is to be developed and reported on the discharge monitoring reports. This parameter to be reported once per 6-months after completion of the permit schedule regarding sampling location, protocols and procedures.
pH:	A parameter limited, per the State's water quality standards, to the range of 6.0 standard units (SU) to 9.0 SU. It is a BPJ determination to continue these limitations to protect water quality in the receiving stream. This parameter is to be reported once per 6-months following completion of the schedule in the permit.
Total Suspended Solids (TSS):	An unlimited parameter to be reported as parts per million (mg/l), as daily maximum concentration value. This parameter shall be reported once per 6-months to confirm that the permittee's approach to utilizing BMPs. The permit identifies the Benchmark Concentration Value (100 mg/l) against which resulting TSS data will be compared.
Dissolved Copper & Dissolved Zinc:	These unlimited parameters will be continued with the reissued permit. Monitoring is required to verify the extent of BMP application during the term of the reissued permit. Monitoring for these parameters shall occur once per year, following completion of the permit's schedule, the resulting data reported as parts per billion (ug/l). The permit identifies Benchmark Concentration Values (18 ug/l, 120 ug/l, respectively) against which resulting metals' data will be compared.
Total Nitrogen, Total Kjeldahl Nitrogen, Nitrite + Nitrate , Nitrogen, Total Phosphorus	Non-significant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorous (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TKN, NO2+NO3, TN, TP, and TSS are required in order to verify the previously un-quantified aggregate wasteload allocations. Monitoring shall occur once per 6-months for a two year period beginning at permit reissuance.

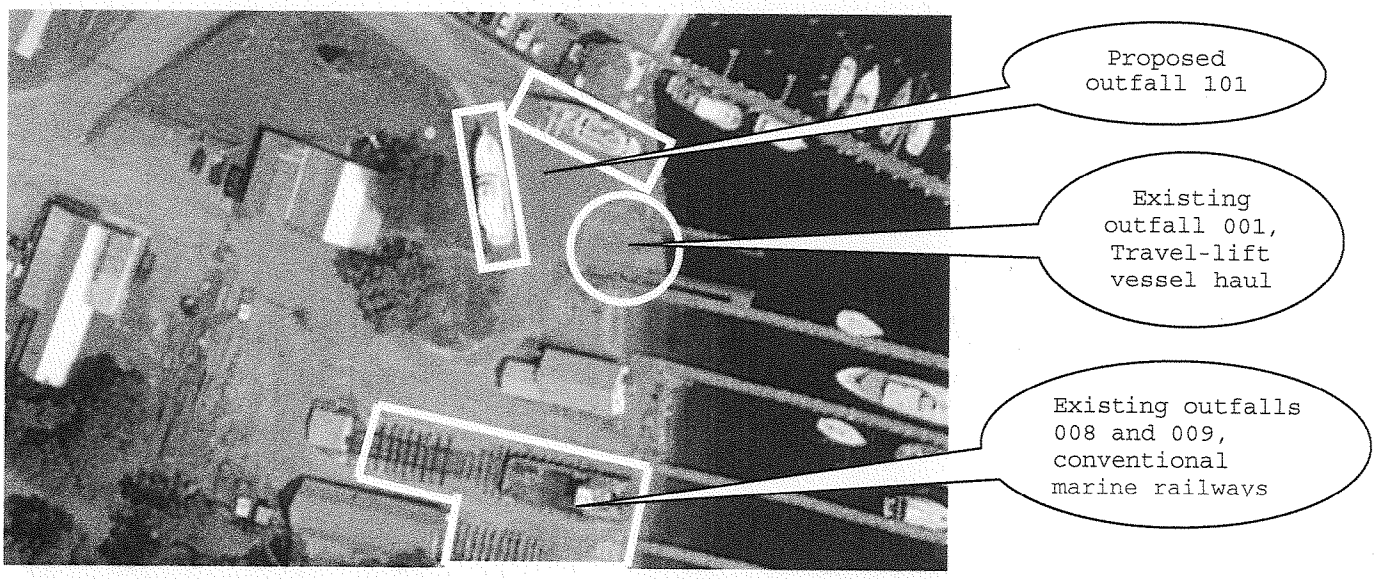
Change in Monitoring Frequency at Outfall 001:

Initial monitoring at this point source location will begin with a monitoring frequency of 1/6 Months (semi-annually) to address additional nutrient monitoring in support of the Chesapeake Bay TMDL. Once the initial two year period of data collection for nutrients is completed, continued monitoring at this location will be reduced to not more than once per calendar year (1/Year) as a permit condition appearing on the relevant page detailed the effluent limitations and monitoring requirements of the reissued permit.

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Process Wastewaters Generated from Travel-Lift Operations - New Outfall 101:

The applicant moved the process wastewater activities at the travel-lift activity to an upland location in proximity to the waterfront concrete pad, per recommendation from PRO staff. Consistent with the requirements of current and relevant guidance pertaining to development of VPDES permits [10], process wastewater generating activities performed at a point internal to the facility and which are associated with an external outfall shall be designated an internal outfall for the purpose of wastewater observation and reporting of specific information to more fully document the industrial activities at this point-source location.



(10) Guidance Memo No. 14-2003, March 2014 VPDES Permit Manual Revisions 03/27/2014

Since the travel-lift haul system is associated with outfall 001 (concrete pad), the designated upland location where the travel-lift is parked for the initial rinsing of the vessel, or water-blasting of the hull to remove biological growth including depleted or failed hull coating systems, will be designated an internal point (Outfall 101) where wastewaters are discharged directly to underlying surfaces.

Monitoring of the activities at this point of industrial activity will not include chemical monitoring or biological toxicity testing, but serve to collect and verify information that has not been fully developed by the applicant or the DEQ. The information sought by this effort includes:

- the actual number of separate process wastewater events generated at the designated upland location per day, across the 5-year term of the VPDES permit,

- the final total volumes of defined process wastewaters generated per vessel hauled and serviced across the 5-year term of individual VPDES permits at the upland location,

- the overall quality of wastewaters based on observations of the applicant and scope of control measures applied to final wastewaters generated at the upland location that result from of vessel maintenance and repair activities associated with travel-lift operations as documented on a regular wastewater report to accompany the quarterly BMP compliance reports.

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Process Wastewaters Generated from Travel-Lift Operations - New Outfall 101:

Following permit reissuance, the permittee will be required to accomplish the actions noted below, with respect to internal outfall 101.

- Beginning on the effective date of the reissued permit, complete the data entry requirements on Attachment B to the permit (Process Wastewater Generation and Management Report), for each vessel haul with the travel-lift, and for all process wastewaters generated at the upland internal point source wastewater location designated Outfall 101.

  This action will develop information specific to industrial wastewaters generated at the upland location, not currently available to Department staff, and from which suitable and appropriate permit content can be developed at the next reissuance to afford greater protections to Fishing Bay, a designated Tier 2 waterbody[8].

- Following permit reissuance, the applicant will be required to formally identify, designate, and report to the DEQ the specific upland area, or areas, in proximity to the concrete pad associated with travel-lift activities, where all process wastewaters will be generated during the term of the reissued permit.

  That action is necessary to identify the discrete area and its boundaries where the focused application of new or enhanced BMPs, and other control measures, can be regularly and effectively imposed to ensure compliance with the final permit.

- Following permit reissuance, the applicant will be required to develop and report to the DEQ those new or enhanced existing BMPs, and other control measures that will achieve a no-discharge status of process wastewaters generated at internal Outfall 101. The no-discharge goal applies to direct discharges of un-treated process wastewaters to surface water of Fishing Bay. This report shall provide a date by when a no-discharge status will be achieved at internal Outfall 101.

  This action is expected to result in site- and operational-specific control measures and BMPs developed and imposed to prevent point source discharges of metal (as dissolved) and solids bearing wastewaters to waters of the Commonwealth. Due to highly permeable soils at the facility, it is expected that process wastewaters will be lost to underlying soils at the upland location. This approach to final wastewater management appears to be a standard practice of activities operating under SIC codes 4493 and 3732 where travel lift vessel haul systems are regularly used, consistent with the Virginia Clean Marina Program. Therefore, protection of the WQS'ds in Fishing Bay begins with the control of wastewater discharges at the upland location designated Outfall 101 under the proposed permit for reissuance.

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Proposed Part I.A. Permit Requirements - Outfalls 008 and 009:

The following parameters are proposed for the reissued permit, specifically for the point source discharges of process wastewaters from the site's two marine railway vessel haul systems, outfalls 008 and 009. Outfall 009 is the largest of the two railways rated for loads of 300 T, with outfall 008 rated at 100 T. The discharges from each railway can enter Fishing Bay within feet of one another. As used in individual VPDES permit issued to shipyards, the DEQ has defined shipyard process wastewaters as follows:

> *For the purpose of this permit, process wastewater related to hull work shall be any water used on a vessel's hull for any purpose regardless of application pressure, including but not limited to the activities of removing marine salts, sediments, marine growth, hull coatings and paint, or other hull, weather deck, or superstructure cleaning activities using water such as preparing those areas for inspection or work (cutting, welding, grinding, etc.).*

This definition will appear on the appropriate outfall's Part I.A. page that also presents the parameters to be monitored, at what frequency and manner, and other specific requirements believed necessary to ensure representative sampling occurs.

Part I.A. Parameters	Rationale/Justification
Flow:	An unlimited parameter reported as millions of gallons per day (MGD). A permit condition will address the manner in which this information is to be developed and reported on the discharge monitoring reports. This parameter to be reported once per year after completion of the schedule of compliance regarding sampling protocols and procedures. An additional requirement of the permit will be the documentation of each vessel haul, the purpose, location, scope, and duration of all pressure washings, an estimate of wastewater volumes per vessel and discussion of BMPs applied for each hull's preparation activity.
pH:	A parameter limited, per the State's water quality standards, to the range of 6.0 standard units (SU) to 9.0 SU. It is a BPJ determination to continue these limitations to protect water quality in the receiving stream. This parameter is to be reported once per year following completion of the schedule in the permit.
Total Suspended Solids (TSS):	An unlimited parameter to be reported as parts per million (mg/l), as daily maximum concentration value. This parameter shall be reported once per year to confirm that the permittee's approach to utilizing BMPs, including actions taken to effectively and efficiently manage wastewaters, are fully capable of satisfying the goals of the Clean Water Act and State and Federal regulations regarding process wastewater discharges known to convey potentially toxic pollutants to Fishing Bay.
Dissolved Copper & Dissolved Zinc:	These parameters will not be addressed by numeric limitations with reissuance of the permit. The goal of the reissued permit is to eliminate all direct discharges of untreated process wastewater to Fishing Bay from each of the marine railways, to the maximum extent practicable, over the term of the permit. Monitoring for these parameters shall occur once per year, following completion of the permit's schedule

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Proposed Part I.A. Permit Requirements - Outfalls 008 and 009: (continued)

Part I.A. Parameters	Rationale/Justification
Total Nitrogen, Total Kjeldahl Nitrogen, Nitrite + Nitrate , Nitrogen, Total Phosphorus	Non-significant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorous (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TKN, NO2+NO3, TN, TP, and TSS are required in order to verify the previously un-quantified aggregate wasteload allocations. Monitoring is required at a frequency of once per year for the term of the permit.
Whole Effluent Toxicity Testing:	Due to the apparent lack of biological toxicity observed at these point source locations of process wastewater discharges, since 2009 for outfall 008 and 2010 for outfall 009, it is proposed that WET testing under the reissued permit be deferred until the next permit application is prepared and submitted. In this regard, it is proposed that WET testing at the representative outfall be performed no later than 180 days prior to expiration of the current permit and the results of those tests be submitted with the permit application due at that time.

Representative Outfalls:

The PRO, based on the apparent similarity in industrial activities and the proximity of the two industrial activities to each other, determined that one railway's wastewater discharge could be used to represent the quality of wastewater discharges from both point source locations, as part of the permit application process. (11) Based on the site visit of September 11, 2013, it was learned that the largest railway haul system (009) was inoperable due to damaged infrastructure beneath the water. Based on a telephone conversation and a news article following the site visit, that railway system may not be repaired in a timely manner. Direct observations of both railways verified their similarity in appearance, operation and function. Although vessels were not present on either railway at that time, vessel repair and maintenance activities, including coatings removal and replacement, hull repair and industrial activities performed by the applicant are all addressed by the same BMPs contained in the permit. Further, the reported chemical and biological toxicity test data generated during the current permit term are also similar based on a review of sampling data available at the time of fact sheet preparation.

In this regard, it has been determined that a permit condition will be developed to allow for sampling of one railway to apply to the second railway, with the expectation that the results of data reviews of the railway sampled will be applied to the railway it represents for the contents of future permits. Further, BMPs and other control measures required by the permit apply equally to each separate marine railway and its industrial activities.

(11) VaDEQ PRO Memorandum dtd October 5, 2011; Request for Application Waiver-Chesapeake Marine Railway VA0091294

SUMMARY OF AVAILABLE DMR DATA
OUTFALL 008 - VA0091294

OUTFALL 008 DMR PERIOD	FLOW (MGD)	pH (SU)	TSS (mg/l)	COD (mg/l)	TPH (mg/l)	DISS Pb (ug/l)	DISS Cu (ug/l)	DISS Zn (ug/l)
1ST SEMI 20077	0							
2ND SEMI 2007	0							
1ST SEMI 2008	0.00002	6.8	218	<15	<1	<5	70	50
2ND SEMI 2008	0							
1ST SEMI 2009	0.000035	8.3	30	10	<1	<5	279	19
2ND SEMI 2009	0							
1ST SEMI 2010	0							
2ND SEMI 2010	0.00004	8.5	13	40	40	5	91	17
1ST SEMI 2011	0.00003	8.7	<1	71	<1	5	26	11
2ND SEMI 2011	0.00004	8.3	4	38	<1	<5	5	24
1ST SEMI 2012	0.00003	8.5	6.7	45	<1	5	3	15
2ND SEMI 2012	0.00002	7.9	5.9	<50	<1	5	3	15
1ST SEMI 2013	0.00003	7.7	3.1	68	<1	5	21	29
2ND SEMI 2013	0.00003	7.6	2.9	42	<1	6	2	12
MAXIMUM	0.00004	8.7	218	71	40	6	279	50
MINIMUM	0.00002	6.8	(0.5)	(7.5)	(0.5)	(2.5)	2	12
AVERAGE	0.00003	8.0	(31.6)	(38.5)	(4.9)	(4.3)	55.6	21.3
COUNT	9	9	9	9	9	9	9	9

11/4/2013 1:54:09 PM

Facility: VA0091294 OF 008 CHESMAR
Chemical: DISSOLVED COPPER
Chronic averaging period: 4 days

WLAa: 4.4 ug/l
WLAc: 69.0 ug/l
Q.L.: 1.0 ug/l

Number samples/month: 1
Number samples/week: 1

Summary of Statistics:

Number observations: 9
Expected Value: 55.5555
Variance: 1111.11
C.V. : 0.6

97th percentile daily values: 135.189
97th percentile 4 day average: 92.4327
97th percentile 30 day average: 67.0029

Number < Q.L.: 0

Model used: BPJ Assumptions, type 2 data

Based on the results of this evaluation, additional controls such as new or enhanced BMPs, are needed based on acute toxicity of the specific parameter evaluated.

Maximum Daily WLAa: 4.4 ug/l
Average Weekly WLAa: 4.4 ug/l
Average Monthly WLAa: 4.4 ug/l

The data are: (expressed as ug/l)

70
279
91
26
5
3
3
21
2

As of the date of this evaluation, the marine railway associated with outfall 008 has not been configured for the collection or retention of process wastewaters generated at this point source location associated with industrial activities under SIC codes 3732 and 4499.

Additional or enhanced Best Management Practices will be required at permit reissuance at this location for copper and zinc based on anti-degradation of Fishing Bay and a reasonable potential for acute toxicity to result from this process wastewater discharge unless additional controls are imposed by the applicant.

11/4/2013 1:55:19 PM

Facility: VA0091294 OF 008 CHESMAR
Chemical: DISSOLVED LEAD
Chronic averaging period: 4 days

WLAa: 120.0 ug/l
WLAc: 110.0 ug/l
Q.L.: 5.0 ug/l

Number samples/month: 1
Number samples/week: 1

Summary of Statistics:

Number observations: 9

Expected Value: 7.44178
Variance: 19.9368
C.V.: 0.6

97th percentile daily values: 18.1089
97th percentile 4 day average: 12.3815
97th percentile 30 day average: 8.97518

Number < Q.L.: 3

Model used: BPJ Assumptions, Type 1 data

Based on the results of this evaluation, additional controls such as new or enhanced BMPs, are not needed based on acute toxicity of the specific parameter evaluated.

The data are:

2.5
2.5
5
5
2.5
5
5
5
6

As of the date of this evaluation, the marine railway associated with outfall 008 has not been configured for the collection or retention of process wastewaters generated at this point source location associated with industrial activities under SIC codes 3732 and 4499.

Additional or enhanced Best Management Practices will be required at permit reissuance at this location for copper and zinc based on anti-degradation of Fishing Bay and a reasonable potential for acute toxicity to result from this process wastewater discharge unless additional controls are imposed by the applicant.

11/4/2013 1:56:29 PM

Facility: VA0091294 OF 008 CHESMAR
Chemical: DISSOLVED ZINC
Chronic averaging period: 4 days

WLAa: 43.0 ug/l
WLAc: 970.0 ug/l
Q.L.: 5.0 ug/l

Number samples/month: 1
Number samples/week: 1

Summary of Statistics:

Number observations: 9

Expected Value: 21.3333
Variance: 163.84
C.V.: 0.6

97th percentile daily values: 51.9129
97th percentile 4 day average: 35.4941
97th percentile 30 day average: 25.7291

Number < Q.L.: 0

Model used: BPJ Assumptions, type 2 data

Based on the results of this evaluation, additional controls such as new or enhanced BMPs, are needed based on acute toxicity of the specific parameter evaluated.

Maximum Daily WLAa: 43 ug/l
Average Weekly WLAa: 43 ug/l
Average Monthly WLAa: 43 ug/l

The data are: (expressed as ug/l)

50
19
17
11
24
15
15
29
12

As of the date of this evaluation, the marine railway associated with outfall 008 has not been configured for the collection or retention of process wastewaters generated at this point source location associated with industrial activities under SIC codes 3732 and 4499.

Additional or enhanced Best Management Practices will be required at permit reissuance at this location for copper and zinc based on anti-degradation of Fishing Bay and a reasonable potential for acute toxicity to result from this process wastewater discharge unless additional controls are imposed by the applicant.

SUMMARY OF AVAILABLE DMR DATA
OUTFALL 009 - VA0091294

OUTFALL 009 DMR PERIOD	FLOW (MGD)	pH (SU)	TSS (mg/l)	COD (mg/l)	TPH (mg/l)	DISS Pb (ug/l)	DISS Cu (ug/l)	DISS Zn (ug/l)
1ST SEMI 2007	0							
2ND SEMI 2007	0							
1ST SEMI 2008	0.00002	7.0	378	<15	<1	40	230	130
2ND SEMI 2008	0							
1ST SEMI 2009	0							
2ND SEMI 2009	0.000035	8.5	3.6	<10	<1	<5	15	12
1ST SEMI 2010	0							
2ND SEMI 2010	0.00004	8.1	2.9	15	<1	43	24	15
1ST SEMI 2011	0.00005	8.7	1.7	646	<1	5	8	16
2ND SEMI 2011	0.00004	8.3	4	38	<1	<5	5	24
1ST SEMI 2012	0.00003	8.5	6.7	45	<1	5	3	15
2ND SEMI 2012	0							
1ST SEMI 2013	0.0004	7.4	2.3	48	<1	5	7	11
2ND SEMI 2013								
MAXIMUM	0.0004	8.7	378	646	(0.5)	43	230	130
MINIMUM	0.00002	7.0	2.3	(5)	(0.5)	(2.5)	3	11
AVERAGE	0.00009	8.1	57	(115)	(0.5)	(14)	41.7	31.9
COUNT	7	7	7	7	7	7	7	7

11/4/2013 1:58:39 PM

Facility: VA0091294 OF 009 CHESMAR
Chemical: DISSOLVED COPPER
Chronic averaging period: 4 days

WLAa: 4.4 ug/l
WLAc: 69.0 ug/l
Q.L.: 1.0 ug/l

Number samples/month: 1
Number samples/week: 1

Summary of Statistics:

Number observations: 7

Expected Value: 41.7142
Variance: 626.429
C.V.: 0.6

97th percentile daily values: 101.508
97th percentile 4 day average: 69.4038
97th percentile 30 day average: 50.3096

Number < Q.L.: 0

Model used: BPJ Assumptions, type 2 data

Based on the results of this evaluation, additional controls such as new or enhanced BMPs, are needed based on acute toxicity of the specific parameter evaluated.

Maximum Daily WLAa: 4.4 ug/l
Average Weekly WLAa: 4.4 ug/l
Average Monthly WLAa: 4.4 ug/l

The data are: (expressed as ug/l)

230
15
24
8
5
3
7

As of the date of this evaluation, the marine railway associated with outfall 009 has not been configured for the collection or retention of process wastewaters generated at this point source location associated with industrial activities under SIC codes 3732 and 4499.

Additional or enhanced Best Management Practices will be required at permit reissuance at this location for copper and zinc based on anti-degradation of Fishing Bay and a reasonable potential for acute toxicity to result from this process wastewater discharge unless additional controls are imposed by the applicant.

11/4/2013 1:59:51 PM

Facility: VA0091294 OF 009 CHESMAR
Chemical: DISSOLVED LEAD
Chronic averaging period: 4 days

WLAa: 120.0 ug/l
WLAc: 110.0 ug/l
Q.L.: 5.0 ug/l

Number samples/month: 1
Number samples/week: 1

Summary of Statistics:

Number observations: 7

Expected Value: 8.05546
Variance: 23.3605
C.V.: 0.6

97th percentile daily values: 19.6023
97th percentile 4 day average: 13.4025
97th percentile 30 day average: 9.71531

Number < Q.L.: 2

Model used: BPJ Assumptions, Type 1 data

Based on the results of this evaluation, additional controls such as new or enhanced BMPs, are not needed based on acute toxicity of the specific parameter evaluated.

The data are: (expressed as ug/l)

40
2.5
43
5
2.5
5
5

As of the date of this evaluation, the marine railway associated with outfall 009 has not been configured for the collection or retention of process wastewaters generated at this point source location associated with industrial activities under SIC codes 3732 and 4499.

Additional or enhanced Best Management Practices will be required at permit reissuance at this location for copper and zinc based on anti-degradation of Fishing Bay and a reasonable potential for acute toxicity to result from this process wastewater discharge unless additional controls are imposed by the applicant.

11/4/2013 2:01:26 PM

Facility: VA0091294 OF 009 CHESMAR
Chemical: DISSOLVED ZINC
Chronic averaging period: 4 days

WLAa: 43.0 ug/l
WLAc: 970.0 ug/l
Q.L.: 5.0 ug/l

Number samples/month: 1
Number samples/week: 1

Summary of Statistics:

Number observations: 7

Expected Value: 31.8571
Variance: 365.355
C.V.: 0.6

97th percentile daily values: 77.5217
97th percentile 4 day average: 53.0036
97th percentile 30 day average: 38.4214

Number < Q.L.: 0

Model used: BPJ Assumptions, type 2 data

Based on the results of this evaluation, additional controls such as new or enhanced BMPs, are needed based on acute toxicity of the specific parameter evaluated.

Maximum Daily WLAa: 43 ug/l
Average Weekly WLAa: 43 ug/l
Average Monthly WLAa: 43 ug/l

The data are: (expressed as ug/l)

130
12
15
16
24
15
11

As of the date of this evaluation, the marine railway associated with outfall 009 has not been configured for the collection or retention of process wastewaters generated at this point source location associated with industrial activities under SIC codes 3732 and 4499.

Additional or enhanced Best Management Practices will be required at permit reissuance at this location for copper and zinc based on anti-degradation of Fishing Bay and a reasonable potential for acute toxicity to result from this process wastewater discharge unless additional controls are imposed by the applicant.

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Storm Water Runoff Associated with Industrial Activities:
Storm water discharges from industrial activities under SIC codes 3732 and 4499 are regulated discharges per the following regulatory citations:
9 VAC 25-31-10[6] Definitions - "Storm water discharge associated with industrial activity means ….. (the definition continues and identifies applicable SIC codes),
9 VAC 25-31-120[6] Storm Water Discharges, and
9 VAC 25-151 General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, Final dtd. 04/27/2009.

Based on the above, there are four discrete locations at the facility where precipitation and resulting runoff originate from areas where industrial activities are performed (travel-lift haul-out - OF 001, marine railways - OFs 908/909, upland maintenance/storage area - OF 002). Much of the facility is unpaved storm water falling upon industrial areas of the site is generally sheet flow following pathways formed by the erosive force of storm water flowing toward Fishing Bay (001, 908/909), or into the pond adjacent to outfall 002.

Industrial Activities - Specific Discussion Outfall 002:

The current permit required the applicant to sample storm water runoff from outfall 002 under that document. During the term of the current permit, the applicant noted on each DMR filed that *"no event occurred during this period"*.

During a site visit on September 11, 2013, the probable drainage area associated with this outfall is unpaved and consists of gravel, crusher-run, and native soils which are sandy in nature. This area is confined by security fencing and typically under observation by facility staff and clients during working hours. The site has no discrete storm water collection systems (concrete piping, swales, etc.) or diversion points (drop inlets, curb cuts, etc.) serving the upland area.

Storm water from the state-maintained Deagle's Road, is collected in a roadway ditch and conveyed beneath this entire location by concrete pipe. This pipe passes beneath the industrial areas of the site, and exits into a slight surface impoundment lying to the south of the yard where industrial activities are performed then into the pond separated from nearby tidal waters.

During the 2013 site visit, a discrete point was observed a few yards west of the yard's boat repair building that appeared depressed and heavily eroded, perhaps indicating that this point is where a majority of storm water runoff from significant storm events may flow into the nearby pond, designated a body of fresh water by PRO staff[8]. Due to excessive vegetation present at the time of observation and a lack of recent rainfall, it was not possible to verify this expectation, but all features of the site at this point indicate a probable and consistent flow path for runoff from this location of industrial activities under SIC Code 3732. Based on observations during site visits in 2013 and 2014, the applicant requires BMPs where work is ongoing and restricts vessels' owners from performing those industrial activities that may result in a significant loss of contaminants to underlying soils.

Based on a BPJ determination, and in lieu of requiring chemical monitoring of storm water at the upland vessel storage area, the permit requires the constant imposition of suitable, appropriate, and extensive BMPs, as well as regular and frequent inspections of all areas where industrial activities are performed at the upland vessel storage and maintenance area. The DEQ's anticipates the narrative requirements of the permit will be protective of surface waters due to the limited duration of restricted industrial activities at this location under continual observation by this applicant, and his staff.

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Proposed Part I.A. Permit Requirements – Outfall 002:

This outfall is that relatively broad point-source location where storm water runoff from the site's upland vessel storage and maintenance yard appears to flow toward a slight and confined surface water impoundment downgradient from the industrial activity, at this location. During the term of the current permit, the applicant has maintained that there is no location from which to collect a discrete sample of runoff due to uncertainties as to how and where to collect those samples from what is considered an unconfined point source location.

In light of the applicant's beliefs in this regard and the structure of the current permit's sampling requirements the permittee requested a waiver from sampling this outfall for permit reissuance purposes. This request was granted by the staff of the PRO [10]. As such, no chemical or discharge flow data are available to consider as part of this permit's reissuance.

With reissuance of the permit, the designated location of outfall 002 will change from the undefined point near the end of pipe conveying storm water runoff from the nearby roadway, to that depressed but broad location expected to convey storm water runoff directly from the upland vessel storage and maintenance.

Based on observations during recent site visits and discussions with the applicant and staff of the PRO in a meeting on September 19, 2014, to review the content of the proposed permit, it was determined that the applicant will not be required to monitor storm water runoff from outfall 002 across the term of the reissued permit. The general rationale for this determination include:

- no existing, permanent, point from which representative samples can be obtained on a recurring basis at the depressed area designated outfall 002,

- surfaces beneath and surrounding the depressed area are porous (e.g., native soils, gravel, etc.) and do not exhibit accumulations of process wastes typically observed at other similar industrial activities, attributed to the scope and duration of BMP application during process activities at this general location, and

- continued commitments from the applicant to impose all suitable and appropriate BMPs across the term of the reissued permit to control unauthorized industrial activities at this location.

To ensure that the applicant remains compliant with the terms, conditions, and intent of the reissued permit in this regard, regular physical inspections of industrial areas at the upland storage and maintenance location will be required on weekly (vessel repair BMP compliance inspections), monthly (SWPPP requirements), and annually (SWPPP annual site compliance evaluations). These inspection reports, and actions taken by the permittee to correct observations contrary to the permit's requirements to maintain runoff from this location at a high quality, are to be regularly submitted to the DEQ, or retained in the on-site SWPPP for review by DEQ inspectors.

As a result of the recent observations and discussions, it has been determined that point source monitoring of storm water runoff from currently non-existent sampling locations for storm water runoff at this location will not be a condition of the reissued permit.

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Proposed Part I.A. Permit Requirements - Outfalls 908 and 909:

These outfalls address storm water discharges associated with industrial activities from areas beneath and surrounding the conventional marine railway vessel haul systems, lying in proximity to each other.

During the term of the current permit, the applicant was to screen storm water discharges annually at each location. Per information submitted by the permittee across the term of the current permit, monitoring of storm water runoff was not possible due to the physical conditions at each location.

Although chemical data were submitted with the permit application, it is believed that this single sampling event was not representative of runoff resulting from ongoing industrial activities at the site. Based on past discussions and recommendations by staff of the PRO, the discharge event from which samples were obtained for analysis was artificially induced with potable water from on-site sources, solely for completing the permit application.

Based on observations of the industrial areas at the marine railways in July 2014, and as discussed with the applicant and staff of the PRO in a meeting on September 19, 2014, to review the content of the proposed permit, it was determined that the applicant will not be required to monitor storm water runoff from either of the two marine railways across the term of the reissued permit. The general rationale for this determination include:

- no existing permanent point from which representative samples can be obtained on a recurring basis at either railway,

- surfaces beneath and surrounding each railway are highly porous (sand) and do not exhibit accumulations of process wastes typically observed at other similar industrial activities, primarily due to the scope and duration of BMP application during process activities, and

- continued commitments from the applicant to impose all suitable and appropriate BMPs across the term of the reissued permit.

To ensure that the applicant remains compliant with the terms, conditions, and intent of the reissued permit in this regard, regular physical inspections of industrial areas at each marine railway will be required on weekly (vessel repair BMP compliance inspections), monthly (SWPPP requirements), and annually (SWPPP annual site compliance evaluations). These inspection reports, and actions taken by the permittee to correct observations contrary to the permit's requirements to maintain runoff from these activities at a high quality, are to be regularly submitted to the DEQ, or retained in the on-site SWPPP for review by DEQ inspectors.

As a result of the recent observations and discussions, it has been determined that point source monitoring of storm water runoff from currently non-existent sampling locations for storm water runoff at the marine railways will not be a condition of the reissued permit.

ATTACHMENT 6
EFFLUENT LIMITATIONS/MONITORING RATIONALE/ SUITABLE DATA/ANTIDEGRADATION/ANTIBACKSLIDING

Required Part I.A. Parameters - Discussion of Parameters Removed at Reissuance:

The following chemical parameters have been removed from the terms and conditions of Part I.A. of the proposed permit:

Chemical Oxygen Demand:

Although elevated values reported for COD may indicate the presence of contaminants resulting from industrial activities, elevated values could also result from interferences caused by excessive chlorides in the samples being characterized. In this case, the facility from which process wastewater and storm water samples are obtained lies upon the shore of a tidal (saline) waterway and it is expected that chlorides (salts) may be present on surfaces of the facility by wind caused deposition of near-shore waters and movement of tidal waters across near-shore areas of the facility. In this regard, COD has been removed from Part I.A. at reissuance.

Dissolved Lead:

Although lead was once prevalent in the vessel repair and maintenance community, it is no longer found at concentrations in effluents from process operations and storm water runoff that warrant continued concern via Part I.A. monitoring performed via VPDES permits. In this regard, lead was not detected in process wastewater sampled at outfalls 008/009 at concentrations that support continued monitoring at permit reissuance. Therefore, lead will be removed from the permit at reissuance.

Total Petroleum Hydrocarbons:

For outfalls 001, 008 (908) and 009 (909), it is not expected that substances collectively grouped by this parameter (TPH as DRO+GRO) will be quantified at detectable or elevated values in discharges from the travel-lift haul feature or marine railways based on activities expected in these areas and BMPs imposed by the applicant to prevent its presence at these industrial areas, on a regular basis.

Total Recoverable vs. Dissolved Metals Monitoring:

The current permit requires monitoring for the metals dissolved copper, zinc and lead. Although lead has been removed from regular monitoring, copper and zinc monitoring will continue across the term of the reissued permit at outfalls 001, 008, or 009. Based on a BPJ determination and considering decades of copper and zinc data collected from point source monitoring at shipyards and vessel repair facilities in the Tidewater Region, it is expected that a large portion of total recoverable metals observed at industrial facilities operating under SIC codes 3731, 3732, and 4499 will be in the dissolved form.

In this regard, and based on discussions with the permittee and staff of the DEQ's PRO in September 2014, monitoring proposed for copper and zinc in the reissued permit will be specific to their total recoverable state. Should these metals' data appear excessive or above the calculated acute wasteload allocations (WLAa) at the time of the next permit reissuance, the Department will determine if numeric limitations are necessary or if monitoring should resume and focus on the metals' dissolved state.

SALTWATER AND TRANSITION ZONES
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Chesapeake Marine Railway Permit No.: VA0091294 Version: OWP Guidance Memo 00-2011 (8/24/00)
Receiving Stream: Fishing Bay

Stream Information

Mean Hardness (as CaCO3) =	100	mg/l
90th % Temperature (Annual) =	29.7	(° C)
90th % Temperature (Winter) =	4.5	(° C)
90th % Maximum pH =	8.2	
10th % Maximum pH =	7.5	
Tier Designation (1 or 2) =	2	
Early Life Stages Present Y/N =	Y	
Tidal Zone =	1	(1 = saltwater, 2 = transition zone)
Mean Salinity =	16.3	(g/kg)

Mixing Information

Design Flow (MGD)	0.00005
Acute WLA multiplier	2
Chronic WLA multiplier	50
Human health WLA multiplier	50

Effluent Information

Mean Hardness (as CaCO3) =	NA	mg/L
90 % Temperature (Annual) =	29.7	(° C)
90 % Temperature (Winter) =	NA	(° C)
90 % Maximum pH =	8.2	SU
10 % Maximum pH =	NA	SU
Discharge Flow =	0.00005	MGD

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Acenapthene	0	--	--	9.9E+02	--	--	5.0E+04	--	--	9.9E+01	--	--	5.0E+03	--	--	**5.0E+03**
Acrolein		--	--	9.3E+00	--	--	4.7E+02	--	--	9.3E-01	--	--	4.7E+01	--	--	**4.7E+01**
Acrylonitrile[C]		--	--	2.5E+00	--	--	1.3E+02	--	--	2.5E-01	--	--	1.3E+01	--	--	**1.3E+01**
Aldrin [C]	0	1.3E+00	--	5.0E-04	2.6E+00	--	2.5E-02	3.3E-01	--	5.0E-05	6.5E-01	--	2.5E-03	**6.5E-01**	--	**2.5E-03**
Ammonia-N (mg/l) - Annual	0	1.77E+00	2.78E-01	--	3.53E+00	1.39E+01	--	4.42E-01	6.95E-02	--	8.84E-01	3.47E+00	--	**8.84E-01**	**3.47E+00**	--
Ammonia-N (mg/l) - Winter	0	#VALUE!	#VALUE!	--	#VALUE!	#VALUE!	--	#VALUE!	#VALUE!	--	#VALUE!	#VALUE!	--	**#VALUE!**	**#VALUE!**	--
Anthracene	0	--	--	4.0E+04	--	--	2.0E+06	--	--	4.0E+03	--	--	2.0E+05	--	--	**2.0E+05**
Antimony	0.2	--	--	6.4E+02	--	--	3.2E+04	--	--	6.4E+01	--	--	3.2E+03	--	--	**3.2E+03**
Arsenic	0.93	6.9E+01	3.6E+01	--	1.4E+02	1.8E+03	--	1.8E+01	9.7E+00	--	3.4E+01	4.4E+02	--	**3.4E+01**	**4.4E+02**	--
Benzene [C]	0	--	--	5.1E+02	--	--	2.6E+04	--	--	5.1E+01	--	--	2.6E+03	--	--	**2.6E+03**
Benzidine[C]		--	--	2.0E-03	--	--	1.0E-01	--	--	2.0E-04	--	--	1.0E-02	--	--	**1.0E-02**
Benzo (a) anthracene [C]	0	--	--	1.8E-01	--	--	9.0E+00	--	--	1.8E-02	--	--	9.0E-01	--	--	**9.0E-01**
Benzo (b) fluoranthene [C]	0	--	--	1.8E-01	--	--	9.0E+00	--	--	1.8E-02	--	--	9.0E-01	--	--	**9.0E-01**
Benzo (k) fluoranthene [C]	0	--	--	1.8E-01	--	--	9.0E+00	--	--	1.8E-02	--	--	9.0E-01	--	--	**9.0E-01**
Benzo (a) pyrene [C]	0	--	--	1.8E-01	--	--	9.0E+00	--	--	1.8E-02	--	--	9.0E-01	--	--	**9.0E-01**
Bis2-Chloroethyl Ether[C]	0	--	--	5.3E+00	--	--	2.7E+02	--	--	5.3E-01	--	--	2.7E+01	--	--	**2.7E+01**
Bis2-Chloroisopropyl Ether	0	--	--	6.5E+04	--	--	3.3E+06	--	--	6.5E+03	--	--	3.3E+05	--	--	**3.3E+05**
Bis2-Ethylhexyl Phthalate[C]	0	--	--	2.2E+01	--	--	1.1E+03	--	--	2.2E+00	--	--	1.1E+02	--	--	**1.1E+02**
Bromoform [C]	0	--	--	1.4E+03	--	--	7.0E+04	--	--	1.4E+02	--	--	7.0E+03	--	--	**7.0E+03**
Butylbenzylphthalate	0	--	--	1.9E+03	--	--	9.5E+04	--	--	1.9E+02	--	--	9.5E+03	--	--	**9.5E+03**
Cadmium	0.5	4.0E+01	8.8E+00	--	8.0E+01	4.2E+02	--	1.0E+01	2.6E+00	--	2.0E+01	1.0E+02	--	**2.0E+01**	**1.0E+02**	--
Carbon Tetrachloride [C]	0	--	--	1.6E+01	--	--	8.0E+02	--	--	1.6E+00	--	--	8.0E+01	--	--	**8.0E+01**
Chlordane [C]	0	9.0E-02	4.0E-03	8.1E-03	1.8E-01	2.0E-01	4.1E-01	2.3E-02	1.0E-03	8.1E-04	4.5E-02	5.0E-02	4.1E-02	**4.5E-02**	**5.0E-02**	**4.1E-02**

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
TRC	0			--			--	--	--	--	--	--	--	--	--	--
Chlorine Prod. Oxidant	0	1.3E+01	7.5E+00	--	2.6E+01	3.8E+02	--	3.3E+00	1.9E+00	--	6.5E+00	9.4E+01	--	**6.5E+00**	**9.4E+01**	--
Chlorobenzene		--	--	1.6E+03	--	--	8.0E+04	--	--	1.6E+02	--	--	8.0E+03	--	--	**8.0E+03**
Chlorodibromomethane[C]	0	--	--	1.3E+02	--	--	6.5E+03	--	--	1.3E+01	--	--	6.5E+02	--	--	**6.5E+02**
Chloroform	0	--	--	1.1E+04	--	--	5.5E+05	--	--	1.1E+03	--	--	5.5E+04	--	--	**5.5E+04**
2-Chloronaphthalene	0	--	--	1.6E+03	--	--	8.0E+04	--	--	1.6E+02	--	--	8.0E+03	--	--	**8.0E+03**
2-Chlorophenol	0	--	--	1.5E+02	--	--	7.5E+03	--	--	1.5E+01	--	--	7.5E+02	--	--	**7.5E+02**
Chlorpyrifos	0	1.1E-02	5.6E-03	--	2.2E-02	2.8E-01	--	2.8E-03	1.4E-03	--	5.5E-03	7.0E-02	--	**5.5E-03**	**7.0E-02**	--
Chromium III	0			--			--	--	--	--	--	--	--	--	--	--
Chromium VI	0	1.1E+03	5.0E+01	--	2.2E+03	2.5E+03	--	2.8E+02	1.3E+01	--	5.5E+02	6.3E+02	--	**5.5E+02**	**6.3E+02**	--
Chrysene [C]	0	--	--	1.8E-02	--	--	9.0E-01	--	--	1.8E-03	--	--	9.0E-02	--	--	**9.0E-02**
Copper	0.5	9.3E+00	6.0E+00	--	1.8E+01	2.8E+02	--	2.7E+00	1.9E+00	--	4.4E+00	6.9E+01	--	**4.4E+00**	**6.9E+01**	--
Cyanide, Free	0	1.0E+00	1.0E+00	1.6E+04	2.0E+00	5.0E+01	8.0E+05	2.5E-01	2.5E-01	1.6E+03	5.0E-01	1.3E+01	8.0E+04	**5.0E-01**	**1.3E+01**	**8.0E+04**
DDD [C]	0	--	--	3.1E-03	--	--	1.6E-01	--	--	3.1E-04	--	--	1.6E-02	--	--	**1.6E-02**
DDE [C]	0	--	--	2.2E-03	--	--	1.1E-01	--	--	2.2E-04	--	--	1.1E-02	--	--	**1.1E-02**
DDT [C]	0	1.3E-01	1.0E-03	2.2E-03	2.6E-01	5.0E-02	1.1E-01	3.3E-02	2.5E-04	2.2E-04	6.5E-02	1.3E-02	1.1E-02	**6.5E-02**	**1.3E-02**	**1.1E-02**
Demeton	0	--	1.0E-01	--	--	5.0E+00	--	--	2.5E-02	--	--	1.3E+00	--	--	**1.3E+00**	--
Diazinon	0	8.2E-01	8.2E-01	--	1.6E+00	4.1E+01	--	2.1E-01	2.1E-01	--	4.1E-01	1.0E+01	--	**4.1E-01**	**1.0E+01**	--
Dibenz(a,h)anthracene [C]	0	--	--	1.8E-01	--	--	9.0E+00	--	--	1.8E-02	--	--	9.0E-01	--	--	**9.0E-01**
1,2-Dichlorobenzene	0	--	--	1.3E+03	--	--	6.5E+04	--	--	1.3E+02	--	--	6.5E+03	--	--	**6.5E+03**
1,3-Dichlorobenzene	0	--	--	9.6E+02	--	--	4.8E+04	--	--	9.6E+01	--	--	4.8E+03	--	--	**4.8E+03**
1,4-Dichlorobenzene	0	--	--	1.9E+02	--	--	9.5E+03	--	--	1.9E+01	--	--	9.5E+02	--	--	**9.5E+02**
3,3-Dichlorobenzidine[C]	0	--	--	2.8E-01	--	--	1.4E+01	--	--	2.8E-02	--	--	1.4E+00	--	--	**1.4E+00**
Dichlorobromomethane [C]	0	--	--	1.7E+02	--	--	8.5E+03	--	--	1.7E+01	--	--	8.5E+02	--	--	**8.5E+02**
1,2-Dichloroethane [C]	0	--	--	3.7E+02	--	--	1.9E+04	--	--	3.7E+01	--	--	1.9E+03	--	--	**1.9E+03**
1,1-Dichloroethylene	0	--	--	7.1E+03	--	--	3.6E+05	--	--	7.1E+02	--	--	3.6E+04	--	--	**3.6E+04**
1,2-trans-dichloroethylene	0	--	--	1.0E+04	--	--	5.0E+05	--	--	1.0E+03	--	--	5.0E+04	--	--	**5.0E+04**
2,4-Dichlorophenol	0	--	--	2.9E+02	--	--	1.5E+04	--	--	2.9E+01	--	--	1.5E+03	--	--	**1.5E+03**
1,2-Dichloropropane[C]	0	--	--	1.5E+02	--	--	7.5E+03	--	--	1.5E+01	--	--	7.5E+02	--	--	**7.5E+02**
1,3-Dichloropropene[C]	0	--	--	2.1E+02	--	--	1.1E+04	--	--	2.1E+01	--	--	1.1E+03	--	--	**1.1E+03**
Dieldrin [C]	0	7.1E-01	1.9E-03	5.4E-04	1.4E+00	9.5E-02	2.7E-02	1.8E-01	4.8E-04	5.4E-05	3.6E-01	2.4E-02	2.7E-03	**3.6E-01**	**2.4E-02**	**2.7E-03**
Diethyl Phthalate	0	--	--	4.4E+04	--	--	2.2E+06	--	--	4.4E+03	--	--	2.2E+05	--	--	**2.2E+05**
2,4-Dimethylphenol	0	--	--	8.5E+02	--	--	4.3E+04	--	--	8.5E+01	--	--	4.3E+03	--	--	**4.3E+03**
Dimethyl Phthalate	0	--	--	1.1E+06	--	--	5.5E+07	--	--	1.1E+05	--	--	5.5E+06	--	--	**5.5E+06**
Di-n-Butyl Phthalate	0	--	--	4.5E+03	--	--	2.3E+05	--	--	4.5E+02	--	--	2.3E+04	--	--	**2.3E+04**
2,4 Dinitrophenol	0	--	--	5.3E+03	--	--	2.7E+05	--	--	5.3E+02	--	--	2.7E+04	--	--	**2.7E+04**
2-Methyl-4,6-Dinitrophenol	0	--	--	2.8E+02	--	--	1.4E+04	--	--	2.8E+01	--	--	1.4E+03	--	--	**1.4E+03**
2,4-Dinitrotoluene [C]	0	--	--	3.4E+01	--	--	1.7E+03	--	--	3.4E+00	--	--	1.7E+02	--	--	**1.7E+02**
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	--	--	5.1E-08	--	--	2.6E-06	--	--	5.1E-09	--	--	2.6E-07	--	--	**2.6E-07**
1,2-Diphenylhydrazine[C]	0	--	--	2.0E+00	--	--	1.0E+02	--	--	2.0E-01	--	--	1.0E+01	--	--	**1.0E+01**
Alpha-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	6.8E-02	4.4E-01	4.5E+03	8.5E-03	2.2E-03	8.9E+00	1.7E-02	1.1E-01	4.5E+02	**1.7E-02**	**1.1E-01**	**4.5E+02**

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Beta-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	6.8E-02	4.4E-01	4.5E+03	8.5E-03	2.2E-03	8.9E+00	1.7E-02	1.1E-01	4.5E+02	**1.7E-02**	**1.1E-01**	**4.5E+02**
Alpha + Beta Endosulfan	0	3.4E-02	8.7E-03	--	6.8E-02	4.4E-01	--	8.5E-03	2.2E-03	--	1.7E-02	1.1E-01	--	**1.7E-02**	**1.1E-01**	--
Endosulfan Sulfate	0	--	--	8.9E+01	--	--	4.5E+03	--	--	8.9E+00	--	--	4.5E+02	--	--	**4.5E+02**
Endrin	0	3.7E-02	2.3E-03	6.0E-02	7.4E-02	1.2E-01	3.0E+00	9.3E-03	5.8E-04	6.0E-03	1.9E-02	2.9E-02	3.0E-01	**1.9E-02**	**2.9E-02**	**3.0E-01**
Endrin Aldehyde	0	--	--	3.0E-01	--	--	1.5E+01	--	--	3.0E-02	--	--	1.5E+00	--	--	**1.5E+00**
Ethylbenzene	0	--	--	2.1E+03	--	--	1.1E+05	--	--	2.1E+02	--	--	1.1E+04	--	--	**1.1E+04**
Fluoranthene	0	--	--	1.4E+02	--	--	7.0E+03	--	--	1.4E+01	--	--	7.0E+02	--	--	**7.0E+02**
Fluorene	0	--	--	5.3E+03	--	--	2.7E+05	--	--	5.3E+02	--	--	2.7E+04	--	--	**2.7E+04**
Guthion	0	--	1.0E-02	--	--	5.0E-01	--	--	2.5E-03	--	--	1.3E-01	--	--	**1.3E-01**	--
Heptachlor [C]	0	5.3E-02	3.6E-03	7.9E-04	1.1E-01	1.8E-01	4.0E-02	1.3E-02	9.0E-04	7.9E-05	2.7E-02	4.5E-02	4.0E-03	**2.7E-02**	**4.5E-02**	**4.0E-03**
Heptachlor Epoxide[C]	0	5.3E-02	3.6E-03	3.9E-04	1.1E-01	1.8E-01	2.0E-02	1.3E-02	9.0E-04	3.9E-05	2.7E-02	4.5E-02	2.0E-03	**2.7E-02**	**4.5E-02**	**2.0E-03**
Hexachlorobenzene[C]	0	--	--	2.9E-03	--	--	1.5E-01	--	--	2.9E-04	--	--	1.5E-02	--	--	**1.5E-02**
Hexachlorobutadiene[C]	0	--	--	1.8E+02	--	--	9.0E+03	--	--	1.8E+01	--	--	9.0E+02	--	--	**9.0E+02**
Hexachlorocyclohexane Alpha-BHC[C]	0	--	--	4.9E-02	--	--	2.5E+00	--	--	4.9E-03	--	--	2.5E-01	--	--	**2.5E-01**
Hexachlorocyclohexane Beta-BHC[C]	0	--	--	1.7E-01	--	--	8.5E+00	--	--	1.7E-02	--	--	8.5E-01	--	--	**8.5E-01**
Hexachlorocyclohexane Gamma-BHC[C] (Lindane)	0	1.6E-01	--	1.8E+00	3.2E-01	--	9.0E+01	4.0E-02	--	1.8E-01	8.0E-02	--	9.0E+00	**8.0E-02**	--	**9.0E+00**
Hexachlorocyclopentadiene	0	--	--	1.1E+03	--	--	5.5E+04	--	--	1.1E+02	--	--	5.5E+03	--	--	**5.5E+03**
Hexachloroethane[C]	0	--	--	3.3E+01	--	--	1.7E+03	--	--	3.3E+00	--	--	1.7E+02	--	--	**1.7E+02**
Hydrogen Sulfide	0	--	2.0E+00	--	--	1.0E+02	--	--	5.0E-01	--	--	2.5E+01	--	--	**2.5E+01**	--
Indeno (1,2,3-cd) pyrene C	0	--	--	1.8E-01	--	--	9.0E+00	--	--	1.8E-02	--	--	9.0E-01	--	--	**9.0E-01**
Isophorone[C]	0	--	--	9.6E+03	--	--	4.8E+05	--	--	9.6E+02	--	--	4.8E+04	--	--	**4.8E+04**
Kepone	0	--	0.0E+00	--	--	0.0E+00	--	--	0.0E+00	--	--	0.0E+00	--	--	**0.0E+00**	--
Lead	0.5	2.4E+02	9.3E+00	--	4.8E+02	4.4E+02	--	6.0E+01	2.7E+00	--	1.2E+02	1.1E+02	--	**1.2E+02**	**1.1E+02**	--
Malathion	0	--	1.0E-01	--	--	5.0E+00	--	--	2.5E-02	--	--	1.3E+00	--	--	**1.3E+00**	--
Mercury	0.75	1.8E+00	9.4E-01	--	2.9E+00	1.0E+01	--	1.0E+00	8.0E-01	--	5.3E-01	2.4E+00	--	**5.3E-01**	**2.4E+00**	--
Methyl Bromide	0	--	--	1.5E+03	--	--	7.5E+04	--	--	1.5E+02	--	--	7.5E+03	--	--	**7.5E+03**
Methylene Chloride [C]	0	--	--	5.9E+03	--	--	3.0E+05	--	--	5.9E+02	--	--	3.0E+04	--	--	**3.0E+04**
Methoxychlor	0	--	3.0E-02	--	--	1.5E+00	--	--	7.5E-03	--	--	3.8E-01	--	--	**3.8E-01**	--
Mirex	0	--	0.0E+00	--	--	0.0E+00	--	--	0.0E+00	--	--	0.0E+00	--	--	**0.0E+00**	--
Nickel	0.5	7.4E+01	8.2E+00	4.6E+03	1.5E+02	3.9E+02	2.3E+05	1.9E+01	2.4E+00	4.6E+02	3.7E+01	9.6E+01	2.3E+04	**3.7E+01**	**9.6E+01**	**2.3E+04**
Nitrobenzene	0	--	--	6.9E+02	--	--	3.5E+04	--	--	6.9E+01	--	--	3.5E+03	--	--	**3.5E+03**
N-Nitrosodimethylamine[C]	0	--	--	3.0E+01	--	--	1.5E+03	--	--	3.0E+00	--	--	1.5E+02	--	--	**1.5E+02**
N-Nitrosodiphenylamine[C]	0	--	--	6.0E+01	--	--	3.0E+03	--	--	6.0E+00	--	--	3.0E+02	--	--	**3.0E+02**
N-Nitrosodi-n-propylamine[C]	0	--	--	5.1E+00	--	--	2.6E+02	--	--	5.1E-01	--	--	2.6E+01	--	--	**2.6E+01**
Nonylphenol	0	7.0E+00	1.7E+00	--	1.4E+01	8.5E+01	--	1.8E+00	4.3E-01	--	3.5E+00	2.1E+01	--	**3.5E+00**	**2.1E+01**	--
Parathion	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Total[C]	0	--	3.0E-02	6.4E-04	--	1.5E+00	3.2E-02	--	7.5E-03	6.4E-05	--	3.8E-01	3.2E-03	--	**3.8E-01**	**3.2E-03**
Pentachlorophenol [C]	0	1.3E+01	7.9E+00	3.0E+01	2.6E+01	4.0E+02	1.5E+03	3.3E+00	2.0E+00	3.0E+00	6.5E+00	9.9E+01	1.5E+02	**6.5E+00**	**9.9E+01**	**1.5E+02**

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Phenol	0	--	--	8.6E+05	--	--	4.3E+07	--	--	8.6E+04	--	--	4.3E+06	--	--	**4.3E+06**
Phosphorus (Elemental)	0	--	1.0E-01	--	--	5.0E+00	--	--	2.5E-02	--	--	1.3E+00	--	--	**1.3E+00**	--
Pyrene	0	--	--	4.0E+03	--	--	2.0E+05	--	--	4.0E+02	--	--	2.0E+04	--	--	**2.0E+04**
Selenium	0.1	2.9E+02	7.1E+01	4.2E+03	5.8E+02	3.5E+03	2.1E+05	7.3E+01	1.8E+01	4.2E+02	1.4E+02	8.9E+02	2.1E+04	**1.4E+02**	**8.9E+02**	**2.1E+04**
Silver	0	1.9E+00	--	--	3.8E+00	--	--	4.8E-01	--	--	9.5E-01	--	--	**9.5E-01**	--	--
1,1,2,2-Tetrachloroethane[C]	0	--	--	4.0E+01	--	--	2.0E+03	--	--	4.0E+00	--	--	2.0E+02	--	--	**2.0E+02**
Tetrachloroethylene[C]	0	--	--	3.3E+01	--	--	1.7E+03	--	--	3.3E+00	--	--	1.7E+02	--	--	**1.7E+02**
Thallium	0	--	--	4.7E-01	--	--	2.4E+01	--	--	4.7E-02	--	--	2.4E+00	--	--	**2.4E+00**
Toluene	0	--	--	6.0E+03	--	--	3.0E+05	--	--	6.0E+02	--	--	3.0E+04	--	--	**3.0E+04**
Toxaphene [C]	0	2.1E-01	2.0E-04	2.8E-03	4.2E-01	1.0E-02	1.4E-01	5.3E-02	5.0E-05	2.8E-04	1.1E-01	2.5E-03	1.4E-02	**1.1E-01**	**2.5E-03**	**1.4E-02**
Tributyltin	0	4.2E-01	7.4E-03	--	8.4E-01	3.7E-01	--	1.1E-01	1.9E-03	--	2.1E-01	9.3E-02	--	**2.1E-01**	**9.3E-02**	--
1,2,4-Trichlorobenzene	0	--	--	7.0E+01	--	--	3.5E+03	--	--	7.0E+00	--	--	3.5E+02	--	--	**3.5E+02**
1,1,2-Trichloroethane[C]		--	--	1.6E+02	--	--	8.0E+03	--	--	1.6E+01	--	--	8.0E+02	--	--	**8.0E+02**
Trichloroethylene [C]	0	--	--	3.0E+02	--	--	1.5E+04	--	--	3.0E+01	--	--	1.5E+03	--	--	**1.5E+03**
2,4,6-Trichlorophenol [C]	0	--	--	2.4E+01	--	--	1.2E+03	--	--	2.4E+00	--	--	1.2E+02	--	--	**1.2E+02**
Vinyl Chloride[C]	0	--	--	2.4E+01	--	--	1.2E+03	--	--	2.4E+00	--	--	1.2E+02	--	--	**1.2E+02**
Zinc	3.4	9.0E+01	8.1E+01	2.6E+04	1.8E+02	3.9E+03	1.3E+06	2.5E+01	2.3E+01	2.6E+03	4.3E+01	9.7E+02	1.3E+05	**4.3E+01**	**9.7E+02**	**1.3E+05**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. For transition zone waters, spreadsheet prints the lesser of the freshwater and saltwater water quality criteria.
6. Regular WLA = (WQC x WLA multiplier) - (WLA multiplier - 1)(background conc.)
7. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
8. Antideg. WLA = (Antideg. Baseline)(WLA multiplier) - (WLA multiplier - 1)(background conc.)

Metal	Site Specific Target Value (SSTV)
Antimony	3.2E+03
Arsenic III	1.4E+01
Cadmium	7.9E+00
Chromium III	#VALUE!
Chromium VI	2.2E+02
Copper	1.8E+00
Lead	4.8E+01
Mercury	2.1E-01
Nickel	1.5E+01
Selenium	5.8E+01
Silver	3.8E-01
Zinc	1.7E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Chesapeake Marine Railway Permit No.: VA0091294

Receiving Stream: UT to Piankatank River Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =	105 mg/L
90% Temperature (Annual) =	23.1 deg C
90% Temperature (Wet season) =	4.2 deg C
90% Maximum pH =	7.6 SU
10% Maximum pH =	6.7 SU
Tier Designation (1 or 2) =	2
Public Water Supply (PWS) Y/N? =	N
Trout Present Y/N? =	N
Early Life Stages Present Y/N? =	Y

Stream Flows

1Q10 (Annual) =	0 MGD
7Q10 (Annual) =	0 MGD
30Q10 (Annual) =	0 MGD
1Q10 (Wet season) =	0 MGD
30Q10 (Wet season)	0 MGD
30Q5 =	0 MGD
Harmonic Mean =	0 MGD

Mixing Information

Annual - 1Q10 Mix =	0 %
- 7Q10 Mix =	0 %
- 30Q10 Mix =	0 %
Wet Season - 1Q10 Mix =	0 %
- 30Q10 Mix =	0 %

Effluent Information

Mean Hardness (as CaCO3) =	105 mg/L
90% Temp (Annual) =	23.1 deg C
90% Temp (Wet season) =	NA deg C
90% Maximum pH =	7.6 SU
10% Maximum pH =	NA SU
Discharge Flow =	0.001 MGD

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Acenapthene	5	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	na	1.0E+02	--	--	na	1.0E+02	--	--	na	**1.0E+02**
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	na	9.3E-01	--	--	na	9.3E-01	--	--	na	**9.3E-01**
Acrylonitrile[C]	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	na	2.5E-01	--	--	na	2.5E-01	--	--	na	**2.5E-01**
Aldrin [C]	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	7.5E-01	--	na	5.0E-05	7.5E-01	--	na	5.0E-05	**7.5E-01**	--	na	**5.0E-05**
Ammonia-N (mg/l) (Yearly)	0	1.70E+01	2.29E+00	na	--	1.70E+01	2.29E+00	na	--	4.26E+00	5.72E-01	na	--	4.26E+00	5.72E-01	na	--	**4.26E+00**	**5.72E-01**	na	--
Ammonia-N (mg/l) (High Flow)	0	1.70E+01	#VALUE!	na	--	1.70E+01	#VALUE!	na	--	4.26E+00	#VALUE!	na	--	4.26E+00	#VALUE!	na	--	**4.26E+00**	**#VALUE!**	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	na	**4.0E+03**
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	na	6.4E+01	--	--	na	6.4E+01	--	--	na	**6.4E+01**
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	8.5E+01	3.8E+01	na	--	8.5E+01	3.8E+01	na	--	**8.5E+01**	**3.8E+01**	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Benzene [C]	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	na	5.1E+01	--	--	na	5.1E+01	--	--	na	**5.1E+01**
Benzidine[C]	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	na	2.0E-04	--	--	na	2.0E-04	--	--	na	**2.0E-04**
Benzo (a) anthracene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	na	**1.8E-02**
Benzo (b) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	na	**1.8E-02**
Benzo (k) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	na	**1.8E-02**
Benzo (a) pyrene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	na	**1.8E-02**
Bis2-Chloroethyl Ether [C]	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	na	5.3E-01	--	--	na	5.3E-01	--	--	na	**5.3E-01**
Bis2-Chloroisopropyl Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	na	6.5E+03	--	--	na	6.5E+03	--	--	na	**6.5E+03**
Bis 2-Ethylhexyl Phthalate [C]	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	na	2.2E+00	--	--	na	2.2E+00	--	--	na	**2.2E+00**
Bromoform [C]	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	na	**1.4E+02**
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	na	**1.9E+02**
Cadmium	0	4.1E+00	1.2E+00	na	--	4.1E+00	1.2E+00	na	--	1.0E+00	2.9E-01	na	--	1.0E+00	2.9E-01	na	--	**1.0E+00**	**2.9E-01**	na	--
Carbon Tetrachloride [C]	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	na	1.6E+00	--	--	na	1.6E+00	--	--	na	**1.6E+00**
Chlordane [C]	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	6.0E-01	1.1E-03	na	8.1E-04	6.0E-01	1.1E-03	na	8.1E-04	**6.0E-01**	**1.1E-03**	na	**8.1E-04**
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	2.2E+05	5.8E+04	na	--	2.2E+05	5.8E+04	na	--	**2.2E+05**	**5.8E+04**	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	4.8E+00	2.8E+00	na	--	4.8E+00	2.8E+00	na	--	**4.8E+00**	**2.8E+00**	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	na	**1.6E+02**

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane[C]	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	na	1.3E+01	--	--	na	1.3E+01	--	--	na	1.3E+01
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	na	1.1E+03
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	na	1.6E+02
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	na	1.5E+01	--	--	na	1.5E+01	--	--	na	1.5E+01
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	2.1E-02	1.0E-02	na	--	2.1E-02	1.0E-02	na	--	2.1E-02	1.0E-02	na	--
Chromium III	0	5.9E+02	7.7E+01	na	--	5.9E+02	7.7E+01	na	--	1.5E+02	1.9E+01	na	--	1.5E+02	1.9E+01	na	--	1.5E+02	1.9E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	4.0E+00	2.8E+00	na	--	4.0E+00	2.8E+00	na	--	4.0E+00	2.8E+00	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	1.0E+01	--	--	--	1.0E+01	--	--	--	na	--
Chrysene[C]	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	na	1.8E-03	--	--	na	1.8E-03	--	--	na	1.8E-03
Copper	0	1.4E+01	9.3E+00	na	--	1.4E+01	9.3E+00	na	--	3.5E+00	2.3E+00	na	--	3.5E+00	2.3E+00	na	--	3.5E+00	2.3E+00	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	5.5E+00	1.3E+00	na	1.6E+03	5.5E+00	1.3E+00	na	1.6E+03	5.5E+00	1.3E+00	na	1.6E+03
DDD[C]	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	na	3.1E-04	--	--	na	3.1E-04	--	--	na	3.1E-04
DDE[C]	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	na	2.2E-04	--	--	na	2.2E-04	--	--	na	2.2E-04
DDT[C]	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	2.8E-01	2.5E-04	na	2.2E-04	2.8E-01	2.5E-04	na	2.2E-04	2.8E-01	2.5E-04	na	2.2E-04
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	2.5E-02	na	--	--	2.5E-02	na	--	--	2.5E-02	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	4.3E-02	4.3E-02	na	--	4.3E-02	4.3E-02	na	--	4.3E-02	4.3E-02	na	--
Dibenz(a,h)anthracene[C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	na	1.8E-02
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	na	1.3E+02
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	na	9.6E+01	--	--	na	9.6E+01	--	--	na	9.6E+01
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	na	1.9E+01	--	--	na	1.9E+01	--	--	na	1.9E+01
3,3-Dichlorobenzidine[C]	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	na	2.8E-02	--	--	na	2.8E-02	--	--	na	2.8E-02
Dichlorobromomethane[C]	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	na	1.7E+01	--	--	na	1.7E+01	--	--	na	1.7E+01
1,2-Dichloroethane[C]	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	na	3.7E+01	--	--	na	3.7E+01	--	--	na	3.7E+01
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	na	7.1E+02	--	--	na	7.1E+02	--	--	na	7.1E+02
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	na	1.0E+03	--	--	na	1.0E+03	--	--	na	1.0E+03
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	na	2.9E+01	--	--	na	2.9E+01	--	--	na	2.9E+01
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
1,2-Dichloropropane[C]	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	na	1.5E+01	--	--	na	1.5E+01	--	--	na	1.5E+01
1,3-Dichloropropene[C]	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	na	2.1E+01	--	--	na	2.1E+01	--	--	na	2.1E+01
Dieldrin[C]	0	2.4E-01	5.6E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	6.0E-02	1.4E-02	na	5.4E-05	6.0E-02	1.4E-02	na	5.4E-05	6.0E-02	1.4E-02	na	5.4E-05
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	na	4.4E+03	--	--	na	4.4E+03	--	--	na	4.4E+03
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	na	8.5E+01	--	--	na	8.5E+01	--	--	na	8.5E+01
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	na	1.1E+05	--	--	na	1.1E+05	--	--	na	1.1E+05
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	na	4.5E+02	--	--	na	4.5E+02	--	--	na	4.5E+02
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	na	5.3E+02	--	--	na	5.3E+02	--	--	na	5.3E+02
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	na	2.8E+01	--	--	na	2.8E+01	--	--	na	2.8E+01
2,4-Dinitrotoluene[C]	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	na	3.4E+00	--	--	na	3.4E+00	--	--	na	3.4E+00
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	na	5.1E-09	--	--	na	5.1E-09	--	--	na	5.1E-09
1,2-Diphenylhydrazine[C]	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	na	2.0E-01	--	--	na	2.0E-01	--	--	na	2.0E-01
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	5.5E-02	1.4E-02	na	8.9E+00	5.5E-02	1.4E-02	na	8.9E+00	5.5E-02	1.4E-02	na	8.9E+00
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	5.5E-02	1.4E-02	na	8.9E+00	5.5E-02	1.4E-02	na	8.9E+00	5.5E-02	1.4E-02	na	8.9E+00
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	5.5E-02	1.4E-02	--	--	5.5E-02	1.4E-02	--	--	5.5E-02	1.4E-02	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	na	8.9E+00	--	--	na	8.9E+00	--	--	na	8.9E+00
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	2.2E-02	9.0E-03	na	6.0E-03	2.2E-02	9.0E-03	na	6.0E-03	2.2E-02	9.0E-03	na	6.0E-03
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	na	3.0E-02	--	--	na	3.0E-02	--	--	na	3.0E-02

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	na	2.1E+02
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	na	1.4E+01
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	na	5.3E+02	--	--	na	5.3E+02	--	--	na	5.3E+02
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	2.5E-03	na	--	--	2.5E-03	na	--	--	2.5E-03	na	--
Heptachlor [c]	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	1.3E-01	9.5E-04	na	7.9E-05	1.3E-01	9.5E-04	na	7.9E-05	1.3E-01	9.5E-04	na	7.9E-05
Heptachlor Epoxide[c]	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	1.3E-01	9.5E-04	na	3.9E-05	1.3E-01	9.5E-04	na	3.9E-05	1.3E-01	9.5E-04	na	3.9E-05
Hexachlorobenzene[c]	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	na	2.9E-04	--	--	na	2.9E-04	--	--	na	2.9E-04
Hexachlorobutadiene[c]	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	na	1.8E+01	--	--	na	1.8E+01	--	--	na	1.8E+01
Hexachlorocyclohexane Alpha-BHC[c]	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	na	4.9E-03	--	--	na	4.9E-03	--	--	na	4.9E-03
Hexachlorocyclohexane Beta-BHC[c]	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	na	1.7E-02	--	--	na	1.7E-02	--	--	na	1.7E-02
Hexachlorocyclohexane Gamma-BHC[c] (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	2.4E-01	--	na	1.8E-01	2.4E-01	--	na	1.8E-01	2.4E-01	--	na	1.8E-01
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	na	1.1E+02	--	--	na	1.1E+02	--	--	na	1.1E+02
Hexachloroethane[c]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	na	3.3E+00	--	--	na	3.3E+00	--	--	na	3.3E+00
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	5.0E-01	na	--	--	5.0E-01	na	--	--	5.0E-01	na	--
Indeno (1,2,3-cd) pyrene [c]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	na	1.8E-02
Iron	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Isophorone[c]	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	na	9.6E+02
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--
Lead	0	1.3E+02	1.4E+01	na	--	1.3E+02	1.4E+01	na	--	3.2E+01	3.6E+00	na	--	3.2E+01	3.6E+00	na	--	3.2E+01	3.6E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	2.5E-02	na	--	--	2.5E-02	na	--	--	2.5E-02	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	3.5E-01	1.9E-01	--	--	3.5E-01	1.9E-01	--	--	3.5E-01	1.9E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	na	1.5E+02
Methylene Chloride [c]	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	na	5.9E+02	--	--	na	5.9E+02	--	--	na	5.9E+02
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	7.5E-03	na	--	--	7.5E-03	na	--	--	7.5E-03	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--
Nickel	0	1.9E+02	2.1E+01	na	4.6E+03	1.9E+02	2.1E+01	na	4.6E+03	4.8E+01	5.3E+00	na	4.6E+02	4.8E+01	5.3E+00	na	4.6E+02	4.8E+01	5.3E+00	na	4.6E+02
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	na	6.9E+01	--	--	na	6.9E+01	--	--	na	6.9E+01
N-Nitrosodimethylamine[c]	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	na	3.0E+00	--	--	na	3.0E+00	--	--	na	3.0E+00
N-Nitrosodiphenylamine[c]	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	na	6.0E+00	--	--	na	6.0E+00	--	--	na	6.0E+00
N-Nitrosodi-n-propylamine[c]	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	na	5.1E-01	--	--	na	5.1E-01	--	--	na	5.1E-01
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	7.0E+00	1.7E+00	--	--	7.0E+00	1.7E+00	--	--	7.0E+00	1.7E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	1.6E-02	3.3E-03	na	--	1.6E-02	3.3E-03	na	--	1.6E-02	3.3E-03	na	--
PCB Total[c]	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	3.5E-03	na	6.4E-05	--	3.5E-03	na	6.4E-05	--	3.5E-03	na	6.4E-05
Pentachlorophenol [c]	0	7.7E-03	5.9E-03	na	3.0E+01	7.7E-03	5.9E-03	na	3.0E+01	1.9E-03	1.5E-03	na	3.0E+00	1.9E-03	1.5E-03	na	3.0E+00	1.9E-03	1.5E-03	na	3.0E+00
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	na	8.6E+04	--	--	na	8.6E+04	--	--	na	8.6E+04
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	na	4.0E+02	--	--	na	4.0E+02	--	--	na	4.0E+02
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	5.0E+00	1.3E+00	na	4.2E+02	5.0E+00	1.3E+00	na	4.2E+02	**5.0E+00**	**1.3E+00**	**na**	**4.2E+02**
Silver	0	3.8E+00	--	na	--	3.8E+00	--	na	--	9.4E-01	--	na	--	9.4E-01	--	na	--	**9.4E-01**	**--**	**na**	**--**
Sulfate	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	**--**	**--**	**na**	**--**
1,1,2,2-Tetrachloroethane[C]	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	na	4.0E+00	--	--	na	4.0E+00	**--**	**--**	**na**	**4.0E+00**
Tetrachloroethylene[C]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	na	3.3E+00	--	--	na	3.3E+00	**--**	**--**	**na**	**3.3E+00**
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	na	4.7E-02	--	--	na	4.7E-02	**--**	**--**	**na**	**4.7E-02**
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	na	6.0E+02	--	--	na	6.0E+02	**--**	**--**	**na**	**6.0E+02**
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	**--**	**--**	**na**	**--**
Toxaphene [C]	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	1.8E-01	5.0E-05	na	2.8E-04	1.8E-01	5.0E-05	na	2.8E-04	**1.8E-01**	**5.0E-05**	**na**	**2.8E-04**
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	1.2E-01	1.8E-02	na	--	1.2E-01	1.8E-02	na	--	**1.2E-01**	**1.8E-02**	**na**	**--**
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	na	7.0E+00	--	--	na	7.0E+00	**--**	**--**	**na**	**7.0E+00**
1,1,2-Trichloroethane[C]	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	na	1.6E+01	--	--	na	1.6E+01	**--**	**--**	**na**	**1.6E+01**
Trichloroethylene [C]	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	na	3.0E+01	--	--	na	3.0E+01	**--**	**--**	**na**	**3.0E+01**
2,4,6-Trichlorophenol [C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	na	2.4E+00	--	--	na	2.4E+00	**--**	**--**	**na**	**2.4E+00**
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	**--**	**--**	**na**	**--**
Vinyl Chloride[C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	na	2.4E+00	--	--	na	2.4E+00	**--**	**--**	**na**	**2.4E+00**
Zinc	0	1.2E+02	1.2E+02	na	2.6E+04	1.2E+02	1.2E+02	na	2.6E+04	3.1E+01	3.1E+01	na	2.6E+03	3.1E+01	3.1E+01	na	2.6E+03	**3.1E+01**	**3.1E+01**	**na**	**2.6E+03**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information. Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+01
Arsenic	2.3E+01
Barium	na
Cadmium	1.8E-01
Chromium III	1.2E+01
Chromium VI	1.6E+00
Copper	1.4E+00
Iron	na
Lead	2.2E+00
Manganese	na
Mercury	1.2E-01
Nickel	3.2E+00
Selenium	7.5E-01
Silver	3.8E-01
Zinc	1.2E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

ATTACHMENT 7

SPECIAL CONDITIONS RATIONALE

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. Permit Reopeners

a. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

b. Nutrient Enriched Waters Reopener

Rationale: 9VAC25-40-70A authorizes DEQ to include technology-based annual concentration limits in the permit of facilities that have installed nutrient control equipment, whether by new construction, expansion, or upgrade. 9VAC25-31-390A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

c. Total Maximum Daily Load (TMDL) Reopener

Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is developed. In addition, the reopener recognizes that, in according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under Section 303 of the Act.

2. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for existing manufacturing, commercial mining and silvicultural discharges.

3. Operations and Maintenance (O & M) Manual - Specific to Vessel Repair and Maintenance Facilities and Operations

Rationale: The State Water Control Law, Section 62.1-44.21 allows requests for any information necessary to determine the effect of the discharge on State waters. Section 401 of the Clean Water Act requires the permittee to provide opportunity for the state to review the proposed operations of the facility. In addition, 40 CFR 122.41 (e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) in order to achieve compliance with the permit (includes laboratory controls and QA/QC).

Additional Discussion: This condition is continued from the current permit, utilizes DEQ boilerplate condition language made specific to this facility and its industrial activities. Since no process wastewater or sanitary wastewater treatment systems exist with final discharges to surface waters, BMPs apply via the current O&M manual.

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS (continued)

4. Quantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per BPJ to clarify the difference between QL and MDL.

5. Compliance Reporting Under Part I.A.

Rationale: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

Additional Discussion: Nonsignificant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorous (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TN, TP and TSS is required in order to verify the aggregate wasteload allocations.

6. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.18:2, authorizes the Board to prohibit any waste discharge which would threaten public health or safety, interfere with or be incompatible with treatment works or water use. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

7. Vessel Repair and Maintenance Facility Best Management Practices (BMPs)

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

Additional Discussion: The DEQ developed shipyard/boatyard BMPs during the late 1980's for use in individual permits issued to industrial activities under SIC codes 3731, 3732, and 4499. These permit requirements are continued from the current permit, specific to the industrial activities expected at the facility.

Attachment A is part of this permit condition and serves as a reporting for the permittee to use to document the scope and focus of periodic and regular inspection of all industrial areas at the facility that may be sources of pollutants under this permit.

8. Process Wastewaters - Outfalls 101, 008, and 009

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-190(H) requires the permittee to furnish information requested by the Agency to determine compliance with the permit; 9 VAC 25-31-220(I) allows for specific effluent sampling protocols to be defined and required by VPDES permits. The State Water Control Law, section 62.1-44.21, authorizes the Board to request information needed to determine the site's discharges impact on State waters. In addition, the Board may require certain operational practices to maintain water quality

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS (continued)

8. Process Wastewaters - Outfalls 101, 008, and 009 (continued)

through the VPDES permit, and to obtain certain information to determine compliance with the permit and/or to better understand process operations that may lead to water quality problems over the 5-year term of the reissued permit.

Attachment B is part of this permit condition and serves to document the volume, duration and scope of each vessel maintenance activity where process wastewaters, as defined by the permit, are generated and released from outfalls 101, 008 and 009 under this permit. This report shall be submitted quarterly with Attachment A and any other documents or reports required at that time.

9. Tributyltin Use Prohibition

Rationale: In the application, the permittee did not identify a need to have this toxic biocide addressed in the permit prepared for reissuance. To date, no information submitted by the permittee over the term of the current permit indicates that there had been any use of TBT during the current permit term (removal of existing coatings, application of new or replacement coatings formulated with any amount of TBT as a booster or primary biocide).

In order to protect water quality in Fishing Bay and due the accumulative nature of this persistent and toxic substance, it is a BPJ determination to prohibit the use of TBT at this facility. The term 'use' is defined as application or removal of coatings with any amount of TBT or its derivatives.

10. Discharges to Surface Waters in the Chesapeake Bay Watershed

Rationale: Nonsignificant dischargers are subject to aggregate wasteload allocations for total nitrogen (TN), total phosphorous (TP) and sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TN and TP is required in order to verify the aggregate wasteload allocations. All dischargers that do not meet this definition are deemed "nonsignificant" dischargers and were included in aggregate WLAs in the TMDL. Numeric WLAs are included in the watershed general permit for all significant dischargers and new or expanding nonsignificant dischargers that meet the criteria included in Part I.G. of the general permit. In keeping with Virginia's Phase I Watershed Implementation Plan (November 29, 2010), compliance with individual numeric WLAs is not required of existing nonsignificant facilities until they expand and trigger the nutrient offset requirements included in the watershed general permit. The nutrient monitoring required by this guidance is intended to provide additional data for the reevaluation of WLAs for nonsignificant facilities. For expanding nonsignificant industrial facilities it will also serve to establish the appropriate "permitted design capacity" for the existing treatment system.

11. Discharges Through a Regulated MS4 to Waters Subject to the Chesapeake Bay TMDL

Rationale: Permit condition required by 9VAC25-151 (General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater Associated with Industrial Activities) to ensure

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS (continued)

permittees conform to specific control measures imposed by localities subject to the terms and conditions of the Chesapeake Bay TMDL. Imposed per a BPJ determination to remain consistent with parallel permit actions affiliated with a common regulatory action by the Department through VPDES permits.

12. Expansion of Facilities that Discharge to Waters Subject to the Chesapeake Bay TMDL

Rationale: Permit condition required by 9VAC25-151 (General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater Associated with Industrial Activities) to ensure permittees conform to specific control measures imposed by localities subject to the terms and conditions of the Chesapeake Bay TMDL. Imposed per a BPJ determination to remain consistent with parallel permit actions affiliated with a common regulatory action by the Department through VPDES permits.

13. Facility Closure Plan

Rationale: This permit condition is required by current and relevant staff guidance (VaDEQ Guidance Memo No. 14- 2003, VPDES Permit Manual Revisions, dated March 27, 2014).

14. Industrial Concept Engineering Report

Rationale: This permit condition is required by current and relevant staff guidance (VaDEQ Guidance Memo No. 14- 2003, VPDES Permit Manual Revisions, dated March 27, 2014).

C. BIOLOGICAL TOXICITY INFORMATION SPECIFIC TO PERMIT APPLICATION

Rationale: Per a best professional judgment (BPJ) determination, biological toxicity testing at outfalls 008 or 009 is being deferred until the next permit application is prepared and submitted for reissuance. Based on a review of available TMP data from point source monitoring during the term of the current permit, toxicity has not been observed at outfall 008 since 2009, and toxicity has not been documented at outfall 009 since 2010.

D. STORM WATER MANAGEMENT CONDITIONS

1. General Storm Water Conditions

a. Sample Type

Rationale: This stipulates the proper sampling methodology for qualifying rain events from regulated storm water outfalls. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

b. Sampling Methodology for Specific Outfalls - Outfall 001

Rationale: Defines permit requirements and methodology for collecting representative effluent samples in conformance with applicable regulations.

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

D. STORM WATER MANAGEMENT CONDITIONS (continued)

1. General Storm Water Conditions

c. Recording of Results

Rationale: This sets forth the information which must be recorded and reported for each storm event sampling (e.g., date and duration event, rainfall measurement, and duration between qualifying events). It also requires the maintenance of daily rainfall logs which are to be reported. This condition is carried over from the previous storm water pollution prevention plan requirements contained in the EPA storm water baseline industrial general permit.

d. Sampling Waiver

Rationale: This condition allows the permittee to collect substitute samples of qualifying storm events in the event of adverse climatic conditions. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

e. Representative Discharge

Rationale: This condition allows the permittee to submit the results of sampling from one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

f. Quarterly Visual Examination of Storm Water Quality

Rationale: This permit condition is not applicable to storm water discharges from outfalls 001, 002, 908, or 909 based on the rationale and discussions tabled at a meeting with the applicant and the compliance and permitting staff of the Piedmont Regional Office. Based on the applicant's continual oversight and prohibition of certain industrial activities in and around the locations noted above as well as difficulties obtaining representative samples from outfalls 002, and 908/909, it was determined that this aspect of the permit would be withdrawn.

g. Allowable Non-Storm Water Discharges

Rationale: The listed allowable non-storm water discharges are the same as those allowed by the EPA in their multi-sector general permit, and are the same non-storm water discharges allowed under the Virginia General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, 9 VAC 25-151-10 et seq. Allowing the same non-storm water discharges in VPDES individual permits provides consistency with other storm water permits for industrial facilities. The non-storm water discharges must meet the conditions in the permit.

h. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

Rationale: This condition requires that the discharge of hazardous substances or oil from a facility be eliminated or

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

D. STORM WATER MANAGEMENT CONDITIONS (continued)

1. General Storm Water Conditions

h. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities (continued)

minimized in accordance with the facility's storm water pollution prevention plan. If there is a discharge of a material in excess of a reportable quantity, it establishes the reporting requirements in accordance with state laws and federal regulations. In addition, the pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

2. Benchmark Concentration Values

Rationale: This permit condition is required by current and relevant staff guidance (VaDEQ Guidance Memo No. 14- 2003, VPDES Permit Manual Revisions, dated March 27, 2014).

3. Storm Water Pollution Prevention Plan

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of law.

4. Facility-Specific Storm Water Management Conditions

Water Transportation and Vessel Repair and Maintenance Facilities

Rationale: These conditions set forth additional site-specific storm water pollution prevention plan requirements. Use of these conditions is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and DEQ's general permit for storm water associated with industrial activities and is consistent with those permits.

Additional Discussion: The requirements imposed at this point are specific to industrial activities under SIC Codes 3731, 3732, and 4499 per the following:

9 VAC 25-31-10(6) Definitions - "Storm water discharge associated with industrial activity means ….. (the definition continues and identifies applicable SIC codes),

9 VAC 25-31-120(6) Storm Water Discharges, and

9 VAC 25-151 General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, Final dtd. 12/17/2013.

ATTACHMENT 8

TOXICS MONITORING/TOXICS REDUCTION/ WET LIMIT RATIONALE

MEMORANDUM
DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE

Water Permits Section
5636 Southern Boulevard
Virginia Beach, Virginia 23462

SUBJECT: Reissuance of VPDES Permit Number VA0091294
Chesapeake Marine Railway, LLC
Deltaville, Virginia

TO: Fact Sheet, Attachment 8

FROM: C. Thomas

DATE: October 9, 2014

COPIES: None

1. The narrative content appearing below is proposed for the subject permit at reissuance. The purpose for this permit condition is to obtain biological toxicity data for review as part of the next permit reissuance cycle. Based on the terms and conditions of the current permit and effluent sampling waivers granted as part of the current reissuance action, negative biological toxicity findings have not been observed since 2009 for outfall 008, 2010 for outfall 009, and outfall 002 has not sampled discharges of storm water runoff since permit issuance with further sampling waived as part of the permit application process.
2. Considering the lack of apparent toxicity at the outfalls involved, as well as the proposed terms and conditions for the permit requiring designation of representative sampling points for regular Part I.A. chemical monitoring following permit reissuance and development of new or enhancement of existing Best Management Practices (BMPs), it is believe appropriate to forego all biological toxicity testing for the effective term of the reissued permit. However, to ensure that the applicant's industrial activities remain compliant and to provide information regarding the permitted discharges' potential to impart biological toxicity upon discharge to surface waters identified in the permit, the results of limited biological toxicity testing to be performed at outfalls 008 or 009 shall be part of the permit application due no later than 180 days prior to expiration of the reissued permit. Due to difficulties obtaining representative samples of runoff from outfall 002, no WET testing is proposed with the permit.
3. Since the heading of the proposed permit condition is not related to a Toxics Management Program, it would also be appropriate to waive imposition of the additional permit maintenance fee of $1000.00 in this specific case as DEQ staff time would be limited to that required by permit application processing actions performed during a regularly scheduled reissuance cycle. In this regard, the text proposed for the reissued permit follows:

C. BIOLOGICAL TOXICITY INFORMATION FOR PERMIT APPLICATION

1. Biological Monitoring

In accordance with Part II.M. of this permit, the permittee shall conduct the following acute toxicity tests for the purpose of completing the permit application due 180 days prior to the expiration date of this permit.

a. Specific Requirements Outfalls 008 or 009

The permittee shall collect a grab sample of final effluent from outfalls 008 or 009 in accordance with Part I.A. of this permit, based on the similarity of industrial activities performed at these point source locations. The grab sample for toxicity testing shall be taken at the same time as monitoring for those chemical parameters required by Part I.A. of this permit. The acute tests to use for discharges to salt water are:

48-Hour Static Acute test using Americamysis bahia:
48-Hour Static Acute test using Cyprinodon variegatus

b. These acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for the calculation of a valid LC_{50}. Express the results as TU_a (Acute Toxic Units) by dividing 100/ LC_{50} for reporting.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. The test dilutions shall be able to determine compliance with the following endpoints:

(1) Outfalls 008 or 009 and 002: Acute LC_{50} of $\geq$100%, equivalent to a TU_a of $\leq$ 1.0

d. If any of the biological screening tests are invalidated, an additional test shall be conducted within thirty (30) days of notification. If there is no discharge during this 30-day period, a sample must be taken during the first qualifying discharge.

e. The permittee shall submit the following information with the results of the toxicity tests for outfall 008 or 009.

(1) The actual or estimated effluent flow at the time of the sampling.

(2) An estimate of the total volume of process wastewater discharged through the sampled outfall during the discharge event.

(3) The actual or estimate of time at which the discharge event began, the time at which the effluent was sampled, and the duration of the discharge event.

(4) The wastewater-specific information required by Part I.B.8.d.(2) of this permit.

2. Reporting Schedule

The permittee shall incorporate complete copies of all toxicity tests and results into the permit application due at the Piedmont Regional Office 180 days before the permit's expiration date, in accordance with Part II.M. of this permit.

A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, and all chains of custody.

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Road, Glen Allen, VA 23060-6296 804/527-5020

SUBJECT: Whole Effluent Toxicity (WET) Test Data Review and Permit Language: Chesapeake Marine Railway, VPDES VA0091294

TO: Deborah DeBiasi, CO- WET

FROM: Janine Howard

DATE: 9/13/12; revised 9/17/12

Facility Name: Chesapeake Marine Railway
Permit Number: VA0091294
Receiving Stream: Fishing Bay
Facility SIC: 3732- Boat Building and Repair
Max Daily Flow: 50 gallons per event (source: Power-washing boats and ships)
Instream Waste Concentration (IWC): 50%

FACILITY DESCRIPTION
Chesapeake Marine Railway is a boat repair facility and boatyard located at 548 Deagle's Road in Deltaville, VA. The facility is located on Fishing Bay Harbor and operates two marine railways (300 ton and 100 ton, Outfalls 009 and 008, respectively), a 50-ton travel lift (Outfall 001), and a boatyard with storage space for approximately 200 boats. Other facilities on site include an office/storage building, a mechanics shop, metal shop, woodworking shop, wood storage shed, and hull shop. The work on the railways varies, with long periods of time when they are vacant. Based on the application, the owner estimates he power washes approximately five boats per year on each of the two railways, using an average of fifty (50) gallons of water per event. The wastewater, generated by power washing activity, is discharged to Fishing Bay which is tidally influenced and tidal default dilution ratios (2:1 acute, 50:1 chronic) are used for permit limitation development. Power-washing on the concrete pad associated with Outfall 001 has ceased according to the 2011 permit application. Therefore, Outfall 001 is to be removed from the reissued permit. The 2006 permit is the first VPDES permit that this facility has held.

FACILITY REQUIREMENTS
The 2006 WET special condition required the following tests to be conducted: acute multi-dilution NOAEC test using *Americamysis bahia* and *Cyprinodon variegatus*. WET tests were required on Outfalls 001, 008, and 009, quarterly until 10 samples were collected for each outfall. The test endpoints were an acute NOAEC of 100%, equivalent to a TU_a of 1.00. Due to sampling difficulties experienced by the permittee, ten data points were not available for each outfall, however all available data was analyzed.

DATA SUMMARY

Outfall 001:
The acute toxicity testing performed on wastewater generated at Outfall 001 is displayed in Tables 1 and 2. All tests met the TUa endpoint designated in the 2006 permit with the exception of the December 2009 invertebrate test (see Table 1). Power-washing on the concrete pad associated with Outfall 001 has ceased according to the 2011 permit application and Outfall 001 will not be included in the reissued permit. Therefore, further evaluation of the toxicity data associated with Outfall 001 is deemed unnecessary due to the removal of the wastewater source.

Table 1: Results of Outfall 001 Acute Toxicity Tests *Americamysis bahia* (invertebrate)

TEST DATE	TEST RESULT	LC_{50}	Test Lab
6/24/09	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
9/23/09	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
12/15/09	NOAEC= 25% TUa = 4	56.9%	James R. Reed & Associates
3/25/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
5/13/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
9/23/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
10/27/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
12/9/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
3/30/11	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
6/2/11	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates

Table 2: Results of Outfall 001 Acute Toxicity Tests *Cyprinodon variegates* (vertebrate)

TEST DATE	TEST RESULT	LC_{50}	Test Lab
6/24/09	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
9/23/09	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
12/15/09	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
3/25/10	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
5/13/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
9/23/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
10/27/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
12/9/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
3/30/11	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
6/2/11	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates

Outfall 008:

Results of the acute toxicity testing performed on wastewater generated at Outfall 008 are displayed in Tables 3 and 4. Every test result met the endpoint requirement identified in the permit. A reasonable potential analysis using Stats.exe was performed on the available data for both species and no toxicity limitation is necessary. Refer to the Stats.exe results in Table 7.

Table 3: Results of Outfall 008 Acute Toxicity Tests *Americamysis bahia* (invertebrate)

TEST DATE	TEST RESULT	LC_{50}	Test Lab
6/25/09	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
3/17/10	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
4/7/10	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
8/30/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
10/27/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
2/24/11	NOAEC = 100% Tua =1	>100%	James R. Reed & Associates
4/13/11	NOAEC = 100% Tua =1	>100%	James R. Reed & Associates

Table 4: Results of Outfall 008 Acute Toxicity Tests *Cyprinodon variegates* (vertebrate)

TEST DATE	TEST RESULT	LC_{50}	Test Lab
6/25/09	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
3/17/10	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
4/7/10	NOAEC= 100% TUa = 1	>100%	James R. Reed & Associates
9/8/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
10/27/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
2/24/11	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
4/13/11	NOAEC = 100% Tua =1	>100%	James R. Reed & Associates

Outfall 009:
Results of the acute toxicity testing performed on wastewater generated at Outfall 009 are displayed in Tables 5 and 6. Each of the *Cyprinodon variegates* test results met the endpoint requirement identified in the permit. The 4/21/09, 11/5/09, and 2/17/10 *Americamysis bahia* did not meet the test endpoints. A reasonable potential analysis using Stats.exe was performed on the available data for both species and no toxicity limitation is necessary for either species. Refer to the Stats.exe results in Table 8.

Table 5: Results of Outfall 009 Acute Toxicity Tests *Americamysis bahia* (invertebrate).

TEST DATE	TEST RESULT	LC_{50}	Test Lab
4/21/09	NOAEC= 50% TUa = 2	78.5%	Coastal Bioanalysts, Inc.
11/5/09	NOAEC = 50% TUa = 2	>100%	James R. Reed & Associates
2/17/10	NOAEC = 25% TUa= 4	34.2%	James R. Reed & Associates
4/6/10	NOAEC = 100% TUa =1	100%	James R. Reed & Associates
9/23/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
10/27/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
2/25/11	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
6/2/11	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
1/31/2012	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
5/22/12	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates

Table 6: Results of Outfall 009 Acute Toxicity Tests *Cyprinodon variegates* (vertebrate).

TEST DATE	TEST RESULT	LC_{50}	Test Lab
4/21/09	NOAEC= 100% TUa = 1	>100%	Coastal Bioanalysts, Inc.
11/5/09	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
2/17/10	NOAEC = 100%, TUa = 1	>100%	James R. Reed & Associates
4/6/10	NOAEC = 100% TUa = 1	>100%	James R. Reed & Associates
9/23/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
10/27/10	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
2/25/11	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
6/2/11	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
1/31/2012	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates
5/22/12	NOAEC = 100% TUa =1	>100%	James R. Reed & Associates

Stats.exe Results:
The results of the reasonable potential evaluation performed on the available toxicity data for Outfalls 008 and 009 is displayed below in Tables 7 and 8, respectively. A permit limitation is not necessary for either species.

Table 7: Stats.exe Results for Acute Toxicity Testing at Outfalls 008

Facility = Ches. Marine Railway Outfall 008 Chemical = Toxicity A. bahia Chronic averaging period = 4 WLAa = 6 WLAc = 50 Q.L. = 1 # samples/mo. = 1 # samples/wk. = 1 Summary of Statistics: # observations = 7 Expected Value = 1 Variance = .36 C.V. = 0.6 97th percentile daily values = 2.43341 97th percentile 4 day average = 1.66379 97th percentile 30 day average= 1.20605 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data No Limit is required for this material The data are: 1 1 1 1 1 1 1	Facility = Ches. Marine Railway Outfall 008 Chemical = Toxicity C. variegates Chronic averaging period = 4 WLAa = 6 WLAc = 50 Q.L. = 1 # samples/mo. = 1 # samples/wk. = 1 Summary of Statistics: # observations = 7 Expected Value = 1 Variance = .36 C.V. = 0.6 97th percentile daily values = 2.43341 97th percentile 4 day average = 1.66379 97th percentile 30 day average= 1.20605 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data No Limit is required for this material The data are: 1 1 1 1 1 1 1

Table 8: Stats.exe Results for Acute Toxicity Testing at Outfalls 009

Facility = Ches. Marine Railway Outfall 009 Chemical = Toxicity A. Bahia Chronic averaging period = 4 WLAa = 6 WLAc = 50 Q.L. = 1 # samples/mo. = 1 # samples/wk. = 1 Summary of Statistics: # observations = 10 Expected Value = 1.48394 Variance = .583040 C.V. = 0.514555 97th percentile daily values = 3.28343 97th percentile 4 day average = 2.31373 97th percentile 30 day average= 1.74617 # < Q.L. = 0 Model used = lognormal No Limit is required for this material The data are: 2 2 4 1 1 1 1 1 1 1	Facility = Ches. Marine Railway Outfall 009 Chemical = Toxicity C. variegates Chronic averaging period = 4 WLAa = 6 WLAc = 50 Q.L. = 1 # samples/mo. = 1 # samples/wk. = 1 Summary of Statistics: # observations = 10 Expected Value = 1 Variance = 0 C.V. = 0 97th percentile daily values = 1 97th percentile 4 day average = 1 97th percentile 30 day average= 1 # < Q.L. = 0 Model used = lognormal No Limit is required for this material The data are: 1 1 1 1 1 1 1 1 1 1

CONCLUSION & RECOMMENDATIONS

Due the results of the statistical analyses that indicated no toxicity limitation is necessary for either species, annual whole effluent toxicity monitoring is recommended for the 2012 permit. The permittee has requested that Outfalls 008 and 009 be considered substantially identical for the purpose of the permit reissuance. Although the railways are different in size, the type of work performed at each location is identical and the two locations sit side by side. Therefore, Outfall 009 will be deemed representative of both Outfalls 008 and 009, for the purpose of toxicity testing, and the monitoring requirement will be applied to Outfall 009. Monitoring at Outfall 009 represents the more conservative approach since Outfall 009 corresponds to the larger of the two marine railways, meaning larger vessels will be worked on at this location. Additionally, the available toxicity data indicates that toxicity arises more frequently at Outfall 009 than 008. The TUa has always been equal to 1 (the test endpoint specified by the 2006 permit) for all vertebrate and invertebrate toxicity testing performed at Outfall 008, whereas the TUa has been greater than one three times for the invertebrate test performed on a sample collected from Outfall 009 (Table 5).

The proposed special condition language for the 2012 permit is included below. Also attached is the WETLIM10 spreadsheet which was used to compute the acute and chronic wasteload allocations used in the statistical evaluation of the need for a limit. Results of the 2012 permit required monitoring at Outfall 009 will be evaluated and permitting decisions made based on the statistical evaluation of

ATTACHMENT 9

MATERIAL STORED

ATTACHMENT 9
MATERIALS STORED

General Discussion:

Being a full-service boat yard and vessel repair and maintenance facility, the applicant maintains a steady inventory of parts and equipment necessary to perform industrial activities at the facility specific to the need of clients.

Due to the limited area associated with the site and its industrial activities, materials stored at the facility are limited to those necessary at the time with waste materials removed to secure locations appropriate to the nature of materials being handled.

A complete or partial listing of all materials expected to be stored or handled at this facility will not be part of this fact sheet leading to permit reissuance.

ATTACHMENT 10

RECEIVING WATERS INFO./ TIER DETERMINATION/STORET DATA/ STREAM MODELING

Thomas, Carl (DEQ)

From: Palmore, Jennifer (DEQ)
Sent: Monday, July 28, 2014 1:10 PM
To: Thomas, Carl (DEQ)
Subject: RE: PRO Planning Conformance Review VA0091294 Chesapeake Marine Railway LLC
Attachments: Planning Concurrence VA0091294 2014.docx

Here you go. I filled out a request form for you.

Thanks for your help!

Jennifer

From: Thomas, Carl (DEQ)
Sent: Friday, July 25, 2014 1:45 PM
To: Palmore, Jennifer (DEQ)
Subject: PRO Planning Conformance Review VA0091294 Chesapeake Marine Railway LLC

Good Afternoon Jennifer Palmore,

Not entirely sure as to the processes of the PRO, but we at the TRO send the proposed draft permit onto our planning folks when we send the DP to the owner and prior to proceeding public notice. The DP/FS/PN were personally delivered to Mr. Farinholt last Monday when Emilee and Laura G. met me at the site last Monday (7/21) for a brief site visit, tour and on-site discussions with the applicant.

The materials that might be necessary for your review can be found at the following location.

T:\PRO\VA0091294 CHESAPEAKE MARINE RAILWAY LLC\PROPOSED ELEMENTS FOR REISSUED PERMIT\ECAedits\07-02-2014 VA0091294 PER TRO-PRO PHONCON OF 06-26-2014\NEAR FINAL 07-18-14 CDT NEW VA0091294 CHESMAR PERMIT

Thanks.

carl.thomas@deq.virginia.gov

757.518.2161

MEMORANDUM
DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Road **Glen Allen, VA 23060** **804/527-5072**

SUBJECT: **PLANNING STATEMENT REQUEST**

TO: **Water Resources Development Staff**

FROM: **Carl Thomas (TRO) via Jennifer Palmore**

DATE: **July 25, 2014**

Please advise of permit conformance with current effective Water Quality Management Plans. Copies of the permit package are attached.

PERMITTEE Chesapeake Marine Railway, LLC

VPDES NO: VA0091294

STATUS: New _____ Reissuance X Modification _____

COUNTY or CITY: Middlesex County

OUTFALL(S): 001/101, 008/908, 009/909, 002

RECEIVING STREAM: Fishing Bay, Piankatank River UT

BASIN: Chesapeake Bay Small Coastal Basin

WATER PERMIT STAFF COMMENTS:

**********************WATER RESOURCES DEVELOPMENT RESPONSE*************************

_____ The proposed effluent limits are not in conformance with existing planning documents.
X The discharge is in conformance with the existing planning documents for the area.
_____ The discharge is not addressed in any planning document but will be included when the plan is updated.

Water Resources Development Comments:
Chesapeake Bay TMDL – covered by rule in Nutrient GP; tech-based TSS limits not required
Lower Piankatank River Shellfish TMDL – not addressed
No WQMP

Jennifer V. Palmore
Signature

July 28, 2014
Date

Thomas, Carl (DEQ)

From: Palmore, Jennifer (DEQ)
Sent: Thursday, May 12, 2011 4:48 PM
To: Howard, Janine (DEQ)
Subject: RE: VA0091294 Chesapeake Marine Railway
Attachments: 91294 Chesapeake Marine Railway.docx; Chesapeake Marine Railway.xlsx; 2010 Fact Sheets for Chesapeake Marine Railway.pdf

Attached is the flow frequency determination that you requested. Please let me know if you have any questions. Thanks.

Jennifer

From: Howard, Janine (DEQ)
Sent: Wednesday, May 04, 2011 11:15 AM
To: Palmore, Jennifer (DEQ)
Subject: VA0091294 Chesapeake Marine Railway

Hi Jennifer,

Please refer to the Flow Frequency Request memo located at the link below. In the folder you will also find some maps that may be helpful. Please let me know if you have any questions.

U:\Permit - Water\VPDES Permits\Individual Permits\Industrial VPDES Permits\VA0091294 Ches. Marine Railway (formerly Deagle's)\2011 Flow Frequency Request

Thank you,

Janine L. Howard
Water Permit Writer

DEQ Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
t: (804) 527-5046
f: (804) 527-5106

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office
4949-A Cox Road Glen Allen, Virginia 23060

SUBJECT: Flow Frequency Determination / 303(d) Status
Chesapeake Marine Railway – VA0091294

TO: Janine Howard

FROM: Jennifer Palmore, P.G.

DATE: May 12, 2011

COPIES: File

The Chesapeake Marine Railway facility is located in Ruark, VA in Middlesex County. Outfalls 001, 008, and 009 discharge to Fishing Bay and outfall 002 drains to an impoundment which is an unnamed tributary of the Piankatank River. The outfalls are located at rivermiles 7-PNK003.85 (001, 008, and 009) and 7-XAL000.22 (002). Flow frequencies have been requested at this site for use in developing effluent limitations for the VPDES permit.

Fishing Bay is tidally influenced. Flow frequencies cannot be determined for tidally affected streams, therefore the default dilution ratios should be used. The discharge is located within the Piankatank River estuary and saltwater criteria should be applied.

The Piankatank River tributary has very little drainage and flow frequencies are assumed to be zero. Due to the ponded nature at the outfall, the DEQ-recommended limits for impoundments should be applied as appropriate.

During the 2010 305(b)/303(d) Water Quality Assessment, Fishing Bay was considered a Category 5A water ("A Water Quality Standard is not attained. The water is impaired or threatened for one or more designated uses by a pollutant(s) and requires a TMDL (303d list)." The applicable fact sheets are attached. The Aquatic Life Use is impaired due to low dissolved oxygen and inadequate submerged aquatic vegetation (SAV) in the Piankatank River mesohaline estuary (PIAMH). The Fish Consumption Use is impaired due to a VDH advisory for PCBs in anadromous (coastal) striped bass. The Shellfish Consumption Use is considered fully supporting with observed effects due to a seasonal VDH condemnation. The Recreation- and Wildlife Uses are fully supporting.

The tributary was not assessed for any of its designated uses; therefore it is considered a Category 3A waterbody.

The Lower Piankatank River Shellfish TMDL was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. The facility was not addressed in the TMDL.

Chesapeake Marine Railway was included in the Chesapeake Bay TMDL, which was approved by the EPA on 12/29/2010. The facility was included in the aggregated total nitrogen, total phosphorus, and total suspended solids wasteload allocations for nonsignificant wastewater dischargers in the Piankatank River mesohaline estuary (PIAMH).

Water quality monitoring data is attached. Data from monitoring station 7-PNK005.78 should be used when calculating the limits for outfalls 001, 008, and 009. The station is located on the Piankatank River at the Route 630 boat ramp, which is on the south side of the river approximately 1.93 mile upstream of the discharge. Field data from station 7-CAV001.62 was chosen to represent the nontidal outfall. The

station is located within the watershed on Carvers Creek at the Route 198 bridge. Unfortunately, hardness data was not collected at this station, therefore hardness at Fox Mill Run at Rt. 17 Business (7-FOX002.49) should be used. The stream is located south of the Piankatank River in watershed VAP-C04R.

Both receiving streams should be considered Tier 2 waters. Although the Piankatank River is impaired for the Aquatic Life Use, the impairments are based on segment-wide conditions and are not necessarily indicative of local water quality conditions. Fishing Bay was sampled on 7/7/2009 at station 7-PNK003.72 which is located approximately 0.2 mile from the discharge and all parameters met the water quality standards (data is attached) and should be considered Tier 2. The tributary has not been monitored and therefore defaults to a Tier 2 water.

If you have any questions concerning this analysis, please let me know.

SUMMARY OF AVAILABLE IN-STREAM DATA
AQM STATION 7-PNK005.78

Sample Collection Date	Temperature (°C)	pH (SU)	Dis Oxygen (mg/l)	Salinity (o/oo)
May 09, 2001	20.5	7.6	8.2	15.6
June 17	30.3	8.3	8.6	14.3
November 14, 2001	14.2	7.8	9.6	19.8
January 16, 2002	4.6	8.0	12.1	20.1
March 5, 2002	9.6	8.3	10.5	18.6
April 29, 2002	20.4	8.1	9.4	19.1
August 15, 2002	31.2	7.8	8.3	17.2
October 16, 2002	19.5	7.5	7.1	20.7
December 04, 2002	4.7	7.9	9.6	16.8
February 10, 2003	4.0	7.9	13.8	12.8
April 21, 2003	14.2	8.2	11.7	11.1
July 08, 2003	28.9	8.2	7.3	11.4
January 31, 2007	2.3	7.4	12.6	11.1
March 15, 2007	12.6	8.0	11.9	no data
May 24, 2007	22.2	7.9	9.4	no data
July 19, 2007	29.8	8.0	8.8	16.1
September 20, 2007	23.2	7.9	6.6	18.9
December 06, 2007	7.6	8.0	11.5	20.5
January 31, 2008	5.7	7.8	8.9	19.4
March 27, 2008	15.7	7.7	9.3	14.4
June 03, 2008	24.3	7.4	7.4	11.5
July 24, 2008	29.4	8.0	7.1	14.9
September 29, 2008	23.4	8.1	8.7	16.3
November 17, 2008	12.4	8.0	9.6	18.7
MAXIMUM	31.2	8.3	13.8	20.7
MINIMUM	2.3	7.4	6.6	11.1
AVERAGE	17.1	7.9	9.5	16.3
COUNT	24	24	24	24
90^{th}%	29.7	8.2		
10^{th}%	4.6	7.5		

SUMMARY OF HARDNESS DATA, AQM STA 7-FOX002.49 (SURROGATE STREAM FOR 002)

SAMPLING DATES	HARDNESS (mg/l as $CACO_3$)	SAMPLING DATES	HARDNESS (mg/l as $CACO_3$)	SAMPLING DATES	HARDNESS (mg/l as $CaCO_3$)
April 10, 1996	78	March 04, 1998	83.3	November 17, 1999	107
July 18, 1996	112	May 06, 1998	109	January 10, 2000	90.6
October 17, 1996	97	September 03, 1998	157	March 16, 2000	120
January 15, 1997	95.2	November 03, 1998	117	July 13, 2000	138
April 21, 1997	124	January 12, 1999	90	September 05, 2000	71.1
July 24, 1997	93.1	March 04, 1999	106	November 08, 2000	128
September 03, 1997	180	May 10, 1999	150	January 25, 2001	99.9
November 05, 1997	72.5	July 14, 1999	101	March 08, 2001	35.6
January 07, 1998	65.1	September 28, 1999	116	**average**	**105**

AVERAGE HARDNESS VALUE FOR USE IN CALCULATING FW METALS WLA = 105 mg/l as $CaCO_3$

SUMMARY OF AVAILABLE IN-STREAM WQ DATA
AQM STATION 7-PKN003.72, FISHING BAY

SAMPLE DATE JULY 07, 2009	TEMP (°C)	pH (SU)	DIS OXY (mg/l)	SALINITY (o/oo)	NH3-N (mg/l)	NO2 (mg/l)	NO3 (mg/l)	NO2+NO3 (mg/l)	ORTHO P (mg/l)
Surface	27.4	7.5	5.9	15.1	0.004	<0.002	<0.004	<0.004	0.006
Midwater					<0.004	<0.002	<0.004	<0.004	0.006
Bottom	25.8	7.5	5.6	15.1	<0.004	<0.002	<0.004	<0.004	0.006
	TOTAL N (mg/l)	TOTAL P (mg/l)	DIS Mg (mg/l)	DIS As (ug/l)	DIS Cd (ug/l)	DIS Cu (ug/l)	DIS Fe (ug/l)	DIS Pb (ug/l)	DIS Mn (ug/l)
Surface	0.291	0.011	539	0.93	<1	<1	<200	<1	8.51
Midwater	0.281	0.012							
Bottom	0.278	0.013							
	DIS Ni (ug/l)	DIS Zn (ug/l)	DIS Sb (ug/l)	DIS Al (ug/l)	DIS Se (ug/l)	DIS Hg (ug/l)			
Surface	<1	3.39	0.2	2.78	<0.2	<1.5			
Midwater									
Bottom									

SUMMARY OF AVAILABLE WQ DATA, AQM STATION 7-CAV001.62 (SURROGATE FOR 002 RECEIVING STREAM)

SAMPLE DATES	TEMP (°C)	pH (SU)	DIS OXY (mg/l)	SALINITY (o/oo)
May 29, 1996	15.9	6.8	6.6	NO DATA
August 23, 1996	20.9	6.7	4.9	NO DATA
February 18, 2009	3.8	7.2	11.2	0
June 15, 2009	23.2	7.7	6.5	0
August 31, 2009	22.6	7.2	5.3	NO DATA
October 26, 2009	14.7	7.2	5.3	NO DATA
January 12,2010	1.5	6.3	14.8	0
March 23, 2010	15.5	7.6	9.0	NO DATA
May 20, 2010	15.6	7.4	7.9	0
July 28, 2010	24.4	7.1	5.4	NO DATA
September 30, 2010	22.1	7.0	5.7	0
November 15 2010	7.9	6.9	8.4	NO DATA
MAXIMUM	24.4	7.7	14.8	0
MINIMUM	1.5	6.3	4.9	0
AVERAGE	15.7	7.1	7.6	0
COUNT	12	12	12	5
90TH%	23.1	7.6		
10TH%	4.2	6.7		

ATTACHMENT 11

303(D) LISTED SEGMENTS

2010 Fact Sheets for 303(d) Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins **HYDROLOGIC UNIT:** 02080102

STREAM NAME: **Chesapeake Bay and Tidal Tributaries**

TMDL ID: **C01E-17-PCB** **2010 IMPAIRED AREA ID:** CB-CB5MH

ASSESSMENT CATEGORY: 5A **TMDL DUE DATE:** 2018

IMPAIRED SIZE: 1,857.084 - Sq. Mi. **Watershed:** VAP-C01E

INITIAL LISTING: 2006

UPSTREAM LIMIT: VA-MD State Line

DOWNSTREAM LIMIT: Mouth

Chesapeake Bay mainstem and its small coastal tidal tributaries

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT: PCBs

The Chesapeake Bay and its tidal tributaries are included under the 12/13/2004 VDH Fish Consumption Advisories for PCBs. No more than 2 meals/month are recommended of anadromous (coastal) striped bass.

Also, VDH issued an additional fish consumption advisory on 12/13/2004 for PCBs in the Mobjack Bay and its tributaries, particularly the East, North, and Ware Rivers. No more than two meals/month of gizzard shad are recommended.

The advisories are based on the results of DEQ's fish tissue monitoring program, which show elevated PCBs levels in several monitoring sites within the basin, including:

7-GWR007.97 in the Great Wicomico River
7-COC000.40 in Cockrell Creek
7-IND001.80 in Indian Creek
7-DYM000.00 in Dymer Creek
7-PNK019.85 in the Piankatank River
7-MLF002.45 in Milford Haven
7-WIN000.88 in Winter Harbor
7-EST002.65 in the East River
7-NOR003.65 in the North River
7-WAR005.77 in the Ware River

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

RECOMMENDATION: Problem Characterization

2010 Fact Sheets for 303(d) Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins **HYDROLOGIC UNIT:** 02080102

STREAM NAME: **Piankatank Mesohaline Estuary**

TMDL ID: PIAMH-DO-BAY **2010 IMPAIRED AREA ID:** CB-PIAMH

ASSESSMENT CATEGORY: 5A **TMDL DUE DATE:** 2010

IMPAIRED SIZE: 24.612 - Sq. Mi. **Watershed:** VAP-C03E

INITIAL LISTING: 2002

UPSTREAM LIMIT: Tidal limit

DOWNSTREAM LIMIT: Mouth at Chesapeake Bay

The Piankatank Mesohaline estuary.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Open Water Use - Not Supporting

IMPAIRMENT: Dissolved Oxygen, Nonpoint Source

In 2002, the tidal mainstem of Dragon Swamp/Piankatank River was listed for dissolved oxygen (DO); the impairment was considered to be due to natural conditions of upstream swamps and stratification. The new Chesapeake Bay criteria were implemented during the 2006 cycle. The segment met the Open Water 30 Day dissolved oxygen criteria, however there was insufficient data to assess the other criteria; therefore this segment remained listed for the DO impairment. The TMDL was due in 2014.

However, during the 2008 and 2010 cycles the mesohaline Piankatank estuary has failed the 30-day Open Water summer dissolved oxygen criteria. Because this segment fails as part of the Bay criteria, the TMDL will be due in 2010. The segment passes the Open Water 30-day rest-of-year standard and there is insufficient data to assess the other dissolved oxygen criteria.

IMPAIRMENT SOURCE: Point Source

The tributary strategy has been developed.

RECOMMENDATION: Problem Characterization

2010 Fact Sheets for 303(d) Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins **HYDROLOGIC UNIT:** 02080102

STREAM NAME: **Piankatank Mesohaline Estuary**

TMDL ID: **PIAMH-SAV-BAY** **2010 IMPAIRED AREA ID:** CB-PIAMH

ASSESSMENT CATEGORY: 5A **TMDL DUE DATE:** 2010

IMPAIRED SIZE: 26.055 - Sq. Mi. **Watershed:** VAP-C04E

INITIAL LISTING: 2006

UPSTREAM LIMIT: Tidal limit

DOWNSTREAM LIMIT: Mouth at Chesapeake Bay

The Piankatank Mesohaline estuary.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Shallow Water Use - Not Supporting

IMPAIRMENT: Aquatic Plants

During the 2006 cycle, the Chesapeake Bay Water Quality Standards were adopted. The Piankatank Mesohaline segment (PIAMH) fails the Submerged Aquatic Vegetation acreage requirements and the Water Clarity Acreage criteria.

IMPAIRMENT SOURCE: Nonpoint Source, Point Source

The tributary strategy has been developed.

RECOMMENDATION: Problem Characterization

ATTACHMENT 12

TABLE III(a) AND TABLE III(b) - CHANGE SHEETS

ATTACHMENT 12
TABLE III(a) - VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List changes FROM PREVIOUS PERMIT, give rationale for changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM/TO	EFFLUENT LIMITS CHANGED FROM/TO	RATIONALE	DATE & INITIAL
001 (now SW)	Flow, pH, TSS	From: 1/6 Months - for first two years of permit, then To: Once per year	From: pH 6 - 9 SU To: No change	Refer to Attachment 6 for full rationale	CDT 10/09/14
	TPH, COD, Dis. Lead, Copper, Zinc	From: 1/6 Months To: Remove from permit	From: No Limit, monitoring only To: Remove from permit		
	T.R. Copper & Zinc	From: Not in permit To: Once per year	From: Not in permit To: No Limit, monitoring only		
	TKN, NO_2+NO_3, Total Phosphorus (P), Total N	From: Not in permit To: Once per 6 Months- for first two years of permit then terminated	From: Not in permit To: No limit, monitoring only for two year period from permit effective date, final report req'd		
901	All parameters	From: Once per year To: Delete Outfall	From: Monitoring only To: Delete Outfall		
101 (now WW)	Designated internal WW location at 001	From: Not in permit To: Daily, weekly, monthly, quarterly observations	From: Not in permit To: No chemical monitoring, regular inspections and reports only		
002	All parameters	From: 1/6 Months To: Remove monitoring	From: pH 6.0 - 9.0 per BPJ To: Remove monitoring		
008, 009	Flow, pH, TSS, T.R. Cu, Zn, TKN, NO_2+NO_3, Total Phosphorus (P), Total N	From: Chemical monitoring and reporting existing To: Added CB TMDL nutrients monitoring for permit term	From: 1/6 Months To: 1/Year for all parameters, monitoring only		
	TPH, COD, Dis. Lead	From: 1/6 Months, To: Removed from Permit.	From: No limits, monitoring only To: Removed from Permit		
908, 909	All Parameters	From: 1/6 Months To: Remove monitoring	From: pH 6.0 - 9.0 per BPJ To: Remove monitoring		
003-007, 010	No parameters	From: No chemical monitoring To: Remove outfalls at permit reissuance	From: No chemical monitoring To: remove outfalls	Refer to Attachment 4	

ATTACHMENT 12
TABLE III(a) - VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List changes FROM PREVIOUS PERMIT, give rationale for changes).

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
Part I.B. Permit Requirements or special Conditions 1. Permit Reopeners - **retain all** a. Nutrient Enriched Waters Reopener b. Water Quality Reopener 2. Materials Storage and Handling - **retain, relocate** 3. Best Management Practices - **retain, revise, relocate** 4. Sampling Methodology for Specific Outfalls - **remove, revise, relocate** 5. Compliance Reporting Under Part I.A. - **retain, revise, relocate** 6. Notification Levels - **retain, relocate** 7. TBT Exclusion - **retain, relocate** 8. Operations and Maintenance Manual - **retain, revise, relocate** 9. EPA Applications 2C and 2F Requirements - **remove** 10. Condition - upgrade of treatment - **remove** 11. TMDL Reopener - **retain, revise, relocate** 12. Water Quality Monitoring - Attachment B - **remove** Part I.C. Toxics Management Program - **remove, revise, re-title** Part I.D. Storm Water Management - **retain, revise, expand** ATTACHMENT A BMP RPT - **Retain, Revise** ATTACHMENT B WQM RPT - **Remove**	Part I.B. Permit Requirements or special Conditions 1. Permit Reopeners - **retained all** a. Water Quality Reopener b. Chesapeake Bay Nutrient Reopener - **revised** c. TMDL Reopener - **relocated** 2. Notification Levels - **retained, relocated** 3. Operations and Maintenance Manual - **retained, revised, relocated** 4. Quantification Levels Under Part I.A. - **added** 5. Compliance Reporting Under Part I.A. - **retained, revised, relocated, expanded** 6. Materials Storage and Handling - **retained, relocated** 7. Vessel Maintenance BMPs - **retained, revised, relocated** 8. Process Wastewaters - All Outfalls - **added** 9. TBT Use Prohibition - **retained, relocated** 10. Discharges to Waters in the ChesBay Watershed - **added per current and relevant guidance** 11. Facility Closure Plan - **added per current and relevant guidance** 12. Industrial Concept Engineering Report - **added per current and relevant guidance** Part I.C. Biological Toxicity Information for Permit Application - **re-titled, revised** Part I.D. Storm Water Management - **retained, revised, expanded** ATTACHMENT A BMP RPT - **Retained, Revised** ATTACHMENT B WW DESCRIPTION AND MANAGEMENT REPORT - **Added**	CDT 07/07/14

ATTACHMENT 12
TABLE III(b) - VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List changes MADE DURING PERMIT PROCESS, give rationale for changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM/TO	EFFLUENT LIMITS CHANGED FROM/TO	RATIONALE	DATE & INITIAL
As of October 9, 2014, no changes to document as they resulted from public notice.					

ATTACHMENT 13

NPDES INDUSTRIAL PERMIT RATING WORKSHEET

NPDES Permit Rating Work Sheet

NPDES NO: |V|A|0|0|9|1|2|9|4|

___ Regular Addition
___ Discretionary Addition
✓ Score change, but no status change
___ Deletion

Facility Name:

|C|H|E|S|A|P|E|A|K|E| |M|A|R|I|N|E| |R|A|I|L|W|A|Y|,| |L|L|C| | | | | |

City: |D|E|L|T|A|V|I|L|L|E|,| |V|I|R|G|I|N|I|A| | | | | | |

Receiving Water: |F|I|S|H|I|N|G| |B|A|Y| | | | | | | | | | | | | | | | | | |

Reach Number: | | | | | | | | | | | | |

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

___ YES: score is 600 (stop here) _X_ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

___ YES; score is 700 (stop here)
_X_ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: | | | | | Primary SIC Code: |3|7|3|2|

Other SIC Codes: |4|4|9|9| | | | | | | | | | | | | | | |

Industrial Subcategory Code: | |9|9| (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	15	___ 7.	7	35
_X_ 1.	1	5	___ 4.	4	20	___ 8.	8	40
___ 2.	2	10	___ 5.	5	25	___ 9.	9	45
			___ 6.	6	30	___ 10.	10	50

Code Number Checked: |0|1|

Total Points Factor 1: |0|5|

FACTOR 2: Flow/Stream Flow Volume *(Complete Either Section A or Section B; check only one)*

Section A--Wastewater Flow Only Considered

Wastewater Type (See Instructions)			Code	Points
Type I:	Flow < 5 MGD	___	11	0
	Flow 5 to 10 MGD	___	12	10
	Flow > 10 to 50 MGD	___	13	20
	Flow > 50 MGD	___	14	30
Type II:	Flow < 1 MGD	_X_	21	10
	Flow 1 to 5 MGD	___	22	20
	Flow > 5 to 10 MGD	___	23	30
	Flow > 10 MGD	___	24	50
Type III:	Flow < 1 MGD	___	31	0
	Flow 1 to 5 MGD	___	32	10
	Flow > 5 to 10 MGD	___	33	20
	Flow > 10 MGD	___	34	30

Section B--Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10%	___	41	0
	> 10% to < 50%	___	42	10
	> 50%	___	43	20
Type II:	<10%	___	51	0
	> 10% to < 50%	___	52	20
	> 50%	___	53	30

Code Checked from Section A or B: |2|1|

Total Points Factor 2: |1|0|

NPDES Permit Rating Work Sheet

NPDES No.: | V | A | 0 | 0 | 9 | 1 | 2 | 9 | 4 |

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) ___ BOD ___ COD ~~x~~ Other: Not Applicable

Permit Limits: (check one)		Code	Points
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: | – |

Points Scored: | – | – |

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		Code	Points
x	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 5000 lbs/day	3	15
___	>5000 lbs/day	4	20

Code Checked: | 1 |

Points Scored: | 0 | 0 |

C. Nitrogen Pollutant: (check one) ___ Ammonia x Other: Not Applicable

Permit Limits: (check one)		Code	Points
___	< 300 lbs/day	1	0
___	300 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: | – |

Points Scored: | – | – |

Total Points Factor 3: | 0 | 0 |

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

___ YES (if yes, check toxicity potential number below)
x NO (if no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column -- check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	0	___ 7.	7	15
___ 1.	1	0	___ 4.	4	0	___ 8.	8	20
___ 2.	2	0	___ 5.	5	5	___ 9.	9	25
			___ 6.	6	10	___ 10.	10	30

Code Number Checked: | – | – |

Total Points Factor 4: | – | – |

NPDES No.: | V | A | 0 | 0 | 9 | 1 | 2 | 9 | 4 |

FACTOR 5: Water Quality Factors

A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?*

TBT use prohibition

		Code	Points
X	Yes	1	10
___	No	2	0

B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

		Code	Points
X	Yes	1	0
___	No	2	5

C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

		Code	Points
___	Yes	1	10
X	No	2	0

Code Number Checked: A | 1 | B | 1 | C | 2 |

Points Factor 5: A | 1 | 0 | + B | 0 | + C | 0 | 0 | = | 1 | 0 | TOTAL

FACTOR 6: Proximity to Near Coastal Waters

A. *Base Score: Enter flow code here (from Factor 2):* | 2 | 1 | *Enter the multiplication factor that corresponds to the flow code:* | . | 1 |

Check appropriate facility HPRI Code (from PCS):

	HPRI #	*Code*	*HPRI Score*
___	1	1	20
___	2	2	0
X ___	3	3	30
___	4	4	0
___	5	5	20

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked: | 3 |

Base Score: (HPRI Score) 30 x (Multiplication Factor) 0.1 = 3.0 (TOTAL POINTS)

B. *Additional Points--NEP Program*
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

		Code	Points
X	Yes	1	10
___	No	2	0

C. *Additional Points--Great Lakes Area of Concern*
for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)

		Code	Points
___	Yes	1	10
X	No	2	0

Code Number Checked: A | 3 | B | 1 | C | 2 |

Points Factor 6: A | 0 | 3 | + B | 1 | 0 | + C | 0 | 0 | = | 13 | TOTAL

NPDES Permit Rating Work Sheet

NPDES NO: | V | A | 0 | 0 | 9 | 1 | 2 | 9 | 4 |

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	5
2	Flow/Stream flow Volume	10
3	Conventional Pollutants	00
4	Public Health Impacts	00
5	Water Quality Factors	10
6	Proximity to Near Coastal Waters	13
	TOTAL (Factors 1-6)	38

S1. Is the total score equal to or greater than 80? ___ Yes (Facility is a major) x No

S2. If the answer to the above question is no, would you like this facility to be discretionary major?

x No

___ Yes (add 500 points to the above score and provide reason below:

Reason:

_____

_____

_____

_____

_____

NEW SCORE: 38

OLD SCORE: 55

C. D. Thomas

Permit Reviewer's Name

(757) 518-2161

Phone Number

November 15, 2013

Date

ATTACHMENT 14

CHRONOLOGY SHEET

ATTACHMENT 14
VPDES PERMIT PROGRAM
CHRONOLOGY OF EVENTS

APPLICATION RECEIVED	APPLICATION RETURNED	ADDITIONAL INFO REQUESTED	APPLICATION/ADD INFO DUE BACK IN RO	APPLICATION/ADD. INFO RECEIVED
05/03/2011		05/03/2011		05/16/2011
		05/18/2011		05/23/2011
		08/02/2011		10/05/2011
		06/14/2012		07/31/2012

APPLICATION TO VDH: 08/02/2011 VDH COMMENTS RECEIVED: 08/10/2011

APPLICATION TO OWPS: N/A OWPS COMMENTS RECEIVED: N/A

APPLICATION ADMIN. COMPLETE: 07/31/2012 APPLICATION TECH. COMPLETE: 10/02/2012

DATE FORWARDED TO ADMIN: N/A

Date	DESCRIPTIVE STATEMENT [CHRONOLOGY OF EVENTS] (Meetings, telephone calls, letters, memos, hearings, etc. affecting permit from application to issuance)
08/01/2013	Processing of VA0091294 assigned to TRO staff per work share agreement with PRO.
09/11/2013	Site visit by TRO staff for facility familiarization and verification of information presented in the application.
07/21/2014	Site visit by TRO and PRO staff to verify content of proposed permit against actual facility operations and to familiarize PRO staff with facility layout and industrial activities. At same time, DP, FS, and other aspects of proposed permit delivered to applicant for review and preparation of comments and questions.
08/05/2014	Meeting at PRO with Va Clean Marina and Va Marine Trades groups to discuss viability of developing boatyard/marina general permit to address and allow process wastewater discharges and other industrial activities typical of applicant's ongoing operations and those of surrounding facilities engaged in same operations, but have yet to be covered by any necessary and appropriate VPDES. VA0091294 is fully covered for process WW and SW from industrial activities as part of the current and proposed permits.
09/19/2014	Meeting at PRO with applicant to discuss proposed content of draft permit. A new PNAF was completed by applicant at this meeting.
09/30/2014	Review of revised DP and FS by staff of PRO without further comment.
10/09/2014	Revised content of DP and FS prepared, repackaged and sent to applicant and staff of PRO for final review before proceeding to public notice

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Division D: Manufacturing
Major Group 37: Transportation Equipment

Industry Group 373: Ship And Boat Building And Repairing

3732 Boat Building and Repairing

Establishments primarily engaged in building and repairing boats. Establishments primarily engaged in manufacturing rubber and nonrigid plastics boats are classified in Major Group 30. Establishments primarily engaged in operating marinas and which perform incidental boat repair are classified in Transportation, Industry 4493; membership yacht clubs are classified in Services, Industry 7997; and those performing outboard motor repair are classified in Services, Industry 7699.

- Boat kits, not a model
- Boats, fiberglass: building and repairing
- Boats, rigid: plastics
- Boats: motorboats, sailboats, rowboats, and canoes-building and
- Canoes, building and repairing
- Dinghies, building and repairing
- Dories, building and repairing
- Fishing boats, small
- Houseboats, building and repairing
- Hydrofoil boats
- Kayaks, building and repairing
- Life boats, building and repairing
- Life rafts, except inflatable (rubber and plastics)
- Motorboats, inboard and outboard: building and repairing
- Pontoons, except aircraft and inflatable (rubber and plastics)
- Skiffs, building and repairing

[SIC Search | Division Structure | Major Group Structure | OSHA Standards Cited]

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Division E: Transportation, Communications, Electric, Gas, And Sanitary Services
Major Group 44: Water Transportation

Industry Group 449: Services Incidental To Water Transportation

4499 Water Transportation Services, Not Elsewhere Classified

Establishments primarily engaged in furnishing miscellaneous services incidental to water transportation, not elsewhere classified, such as lighterage, boat hiring, except for pleasure; chartering of vessels; canal operation; ship cleaning, except hold cleaning; and steamship leasing. Establishments primarily engaged in ship hold cleaning are classified in Industry 4491; and those primarily engaged in the operation of charter or party fishing boats or rental of small recreational boats are classified in Services, Industry 7999.

- Boat cleaning
- Boat hiring, except pleasure
- Boat livery, except pleasure
- Boat rental, commercial
- Canal operation
- Cargo salvaging, from distressed vessels
- Chartering of commercial boats
- Dismantling ships
- Lighterage
- Marine railways for drydocking, operation of
- Marine salvaging
- Marine surveyors, except cargo
- Marine wrecking: ships for scrap
- Piloting vessels in and out of harbors
- Ship cleaning, except hold cleaning
- Ship registers: survey and classification of ships and marine
- Steamship leasing

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www.OSHA.gov

Thomas, Carl (DEQ)

From: Jon Farinholt [jon@chesapeakeboatworks.com]
Sent: Friday, October 17, 2014 12:51 PM
To: Thomas, Carl (DEQ)
Cc: Ricks, Bradford (DEQ); Winter, Kyle (DEQ); Galli, Laura (DEQ)
Subject: RE: Reissuance of VA0091294, Revised DP & FS from Meeting of 09/19/14

Carl,

I'm all good with this.

Regards,

Jon Farinholt
Chief Operating Officer
Chesapeake Boat Works LLC
804-776-8833

From: Thomas, Carl (DEQ) [mailto:Carl.Thomas@deq.virginia.gov]
Sent: Thursday, October 09, 2014 3:52 PM
To: jon@chesapeakeboatworks.com
Cc: Ricks, Bradford (DEQ); Winter, Kyle (DEQ); Galli, Laura (DEQ)
Subject: Reissuance of VA0091294, Revised DP & FS from Meeting of 09/19/14

Good Afternoon Mr. Farinholt,

Please find attached to this mailing the revised draft permit and fact sheet content supporting the permit. The transmittal letter for those changes is also attached.

Since it appears that we have addressed your immediate concerns and the concerns of the PRO which were discussed during our meeting, we would like to proceed to the public notice phase of permit reissuance by Monday, October 20, 2014.

With respect t to the reduced frequency of monitoring proposed for outfall 001, following the initial two-year period of nutrient monitoring, you will receive an amended DMR from the PRO that reflects the reduced frequency as well as the removal of the nutrient parameters.

If you have additional concerns or questions, we request those not later than Friday, October 17, 2014.

If you are satisfied with the changes and want to proceed to public notice, we would like your concurrence to proceed, also not later than Friday, October 17, 2014, or earlier, as your schedule allows.

It has been a distinct pleasure working with you on getting this permit developed to the point of probable reissuance, that provides full coverage of your industrial activities under SIC codes 3731 and 4499.

In conclusion, if there are any questions whatsoever, pass them along as your time allows.

Thank you again for your time, attention to the process, and continued interest in protecting water quality across this Commonwealth.

carl.thomas@deq.virginia.gov

757.518.2161

Thomas, Carl (DEQ)

From: Thomas, Carl (DEQ)
Sent: Thursday, October 09, 2014 3:51 PM
To: 'jon@chesapeakeboatworks.com'
Cc: Ricks, Bradford (DEQ); Winter, Kyle (DEQ); Galli, Laura (DEQ)
Subject: Reissuance of VA0091294, Revised DP & FS from Meeting of 09/19/14
Attachments: VA0091294 TRANSLTR FOR REVSD DP-FS FM 9-19-2014 MTG WITH APPLICANT AT PRO.pdf; REVISED VA0091294 DP BASED ON 9-19-2014 MTG WITH APPLICANT AT PRO.pdf; REVISED VA0091294 FS BASED ON 9-19-2014 MTG WITH APPLICANT AT PRO.pdf

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carl.thomas@deq.virginia.gov

757.518.2161

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Maria R. Nold
Regional Director

October 9, 2014

Mr. Jon Farinholt
Chief Operating Officer
Chesapeake Marine Railway, LLC
548 Deagle's Road
Deltaville, Virginia 23043

Re: Reissuance of VPDES Permit Number VA0091294
Chesapeake Marine Railway, LLC, Deltaville, Virginia

Dear Mr. Farinholt:

Please find attached to the e-mail transmitting this letter, the revised draft permit proposed for reissuance to your facility, and those sections of the fact sheet that were revised to support the content of the permit. The content of each document reflects the discussions and agreements which were tabled during our meeting of September 19, 2014, held at the Piedmont Regional Office.

The changes include:

Outfall 001: Following completion of the nutrient monitoring at this location, continued monitoring will be reduced to a frequency of once per year for the remaining term of the permit. Metals' monitoring will be total recoverable in lieu of dissolved.

Outfall 002: Monitoring proposed by the initial version of the permit has been removed based on discussions during our recent meeting. In this regard, the permit will stress frequent and regular site inspections of those areas draining from the upland vessel maintenance and storage area, in lieu of chemical monitoring and reporting of the resulting data.

Outfalls 908/909: Monitoring proposed by the initial version of the permit has been removed based on discussions during our recent meeting. In this regard, the permit will stress frequent and regular site inspections of those areas draining from the site's conventional marine railways, in lieu of chemical monitoring and reporting of the resulting data.

Outfalls 008/009: Metals' monitoring will be total recoverable in lieu of dissolved.

Other Permit Changes: Where necessary and appropriate, different sections of the proposed permit were revised to support the outfall specific changes noted above, to further clarify permit section titles, and other permit content consistent with the discussions during our recent meeting.

Fact Sheet: Changes to the fact sheet were made to specific Attachments to this document. The entire fact sheet will not be provided as the changes were specific to those Attachments. In this regard, please find the first seven (7) pages of the fact sheet, Attachment 5, Attachment 6, Attachment 7, Attachment 8, Attachment 12, and the Chronology of Events page, from Attachment 14.

Please review the material provided on this date closely and compare them against the documents you were provided during a joint TRO/PRO site visit on July 21, 2014. It was that permit which was discussed during our meeting last month.

Reissuance of VPDES Permit Number VA0091294
Chesapeake Marine Railway
LLC, Deltaville, Virginia

Based on our meetings and site visits over the past year, we believe that the recent changes to the permit are appropriate and that the revised permit content remains protective of the environment and those surface waters of Fishing Bay and the Piankatank River that support your facility's industrial activities.

At the conclusion of our meeting at the Piedmont Regional Office on September 19, 2014, you completed a current Public Notice Authorization form that allows us to proceed to the 30-day public notice phase, necessary to conclude the permit's reissuance.

If the permit changes that you will receive with this letter are suitable, appropriate, and conform to the agreements at our meeting, and unless we hear otherwise from you, we intend to proceed to public notice by not later than Monday, October 20, 2014.

If there are any other issues or concerns regarding the proposed content of the permit or supporting documentation, you will need to provide those issues to us as soon as possible, no later than Friday, October 17, 2014. If we do not hear from you by that date, we will proceed to public notice shortly thereafter.

You will be billed separately for the cost of public notice in the paper of local circulation. Should changes be made to the permit that would remove additional content or make it less stringent during the period of public notice, the permit would have to be re-noticed at additional cost to you.

In conclusion, if the revised content of the proposed permit and supporting elements and attachments of the fact sheet are acceptable to you and your company's industrial activities, it is requested that concurrence to proceed to public notice be provided by you no later than Friday, October 17, 2014, so that we move on to the public notice phase the following Monday.

If you have any questions or comments on the draft permit or public notice requirements, please contact me at (757) 518-2161 or by email at carl.thomas@deq.virginia.gov .

Sincerely,

Carl D. Thomas
Environmental Specialist, Senior

Encl: Draft Permit (complete),
Fact Sheet (selected attachments and content)

cc: DEQ - TRO/PRO/file (VA0091294@ECM

RECEIVED
AUG 10 2011
PRO

COMMONWEALTH of VIRGINIA

Karen Remley, MD, MBA, FAAP
State Health Commissioner

J.Wesley Kleene, PhD, PE
Director, Office of Drinking Water

DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER
East Central Field Office

300 Turner Road
Richmond, VA 23225
Phone: 804-674-2880
Fax: 804-674-2815

TO: Janine L. Howard, Water Permit Writer
Department of Environmental Quality, Piedmont Regional Office

FROM: Bennett K. Ragnauth, P. E., Field Director
Office of Drinking Water, East Central Field Office

8/9/2011

DATE: August 9, 2011

SUBJECT: VPDES Draft Permit No. VA0091294 ■ Re-issuance ☐ Issuance (new) ☐ Adding Outfall
VWP Permit Application No. _____

COUNTY/CITY: Midlesex County

OWNER/APPLICANT: Chesapeake Marine Railway

LOCATION OF DISCHARGE / ACTIVITY Piankatank River.

COMMENTS:

■ There are no public water supply intakes within 15 miles downstream of the proposed discharge / activity. We do not object to the permit.

☐ The raw water intake for the _____ waterworks is located ___ miles downstream from the discharge. We recommend a minimum Reliability Class ___ for this facility [, which is] [the same as the existing Reliability Class] [more stringent than the existing Reliability Class]. We do not object to the permit.

☐ The raw water intake for the _____ waterworks is located ___ miles downstream from the discharge. We object to the proposed discharge due to the potential threat to water quality at the public water system intake.

☐ Please forward a copy of the Draft Permit for our review and comment.

■ Other comments:

ANM Reviewer: Azhar N. Mirza, District Engineer

C:. VDH-Central Office, ODW

R:\PD18\05-Project Review\01-Application-DEQ\VPDES\Chesp. Marine Railway 2011

Thomas, Carl (DEQ)

From:	Thomas, Carl (DEQ)
Sent:	Friday, October 18, 2013 11:34 AM
To:	Skiles, Keith (VDH)
Cc:	Howell, Beth (MRC); Stagg, Ben (MRC)
Subject:	FW: Reissuance of VPDES Permit No. VA0091294, Chesapeake Marine Railway, Middlesex County
Attachments:	Reissuance of VPDES Permit No. VA0091294, Chesapeake Marine Railway, Middlesex County; VA0091294 2014-2019 CHES MARINE RAILWAY APP TO dss .pdf; VA0091294 2014-2019 CHES MARINE RAILWAY APP TO VMRC.pdf

Tracking:

Recipient	Delivery
Skiles, Keith (VDH)	Delivered: 10/18/2013 11:34 AM
Howell, Beth (MRC)	
Stagg, Ben (MRC)	

Good Morning All,

This mailing is being sent to request reviews of the permit application for the subject facility. VDH/DW review was completed, without comment, on August 9, 2011, based on the request and information appearing in the e-mail being forwarded with this mailing.

Attached to this mailing are the application review requests specific to each of your organizations. Attached to the mailing attached – are the applications submitted to date.

The TRO has partnered with the PRO to develop selected and expired VPDES permit to conclusion. This request is specific to Chesapeake Marine and does not appear to have been requested by the PRO as part of this process spanning across several years as of this date.

If additional information is necessary or required, please let me know as soon as possible.

Thanks for your attention to this matter.

carl.thomas@deq.virginia.gov

757.518.2161

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TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Doug Domenech
Secretary of Natural Resources

David K. Paylor
Director

Maria R. Nold
Regional Director

October 18, 2013

Division of Shellfish Sanitation (DSS)
Virginia Department of Health
109 Governor Street, Room 614B
Richmond, Virginia 23219

Re: Reissuance of VPDES Permit Number VA0091294
Chesapeake Marine Railway
Deltaville, Virginia

Dear Sir:

Enclosed is a copy of a VPDES permit application for your review. A copy has also been sent to the Virginia Marine Resources Commission. Please review this application and provide your comments within 14 days to DEQ identifying the location of any shell fish growing areas that would have to be condemned pursuant to Virginia Code § 28.2-807 (e.g., reclassified as restricted or prohibited as defined by the National Shellfish Program) as a result of the proposed discharge of pollutants described in the application.

Alternatively, you may respond to DEQ within 14 calendar days of receipt of the application that DSS intends to conduct a further reevaluation of the proposed discharge site. If DSS intends to conduct a further evaluation, please provide your comments to DEQ within 30 calendar days after receipt of the application. In the event that DSS anticipates that, due to the complexity of a proposal or the scope of an evaluation, it will not be able to make a determination within 30 days after receipt of the application, please, within 14 days of receipt, inform DEQ of the anticipated time required to further evaluate the application. These deadlines are specified in the agreement between the Director of DEQ and the Commissioner of the VDH to ensure that DEQ can process the permit in a timely manner.

Please also provide a copy of any correspondence relative to this application to the Virginia Marine Resources Commission at the following address:

Virginia Marine Resources Commission
2600 Washington Avenue, 3^{d} Floor
Newport News, Virginia 23607

If you have any questions, please feel free to contact this office at (757) 518-2161 or by e-mail carl.thomas@deq.virginia.gov .

Sincerely,

Carl D. Thomas
Environmental Specialist, Senior

cc: DEQ - TRO/file (VA0091294@ECM)
Encl: VPDES Permit Application (w/e-mail transmission)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Doug Domenech
Secretary of Natural Resources

David K. Paylor
Director

Maria R. Nold
Regional Director

October 18, 2013

Virginia Marine Resources Commission (VMRC)
2600 Washington Avenue, 3rd Floor
Newport News, Virginia 23607

Re: Reissuance of VPDES Permit Number VA0091294
Chesapeake Marine Railway, Deltaville, Virginia

Dear Sir or Madam:

Enclosed for your review is a copy of a VPDES permit application for a proposed discharge of pollutants from a point source to state waters adjacent to, or in near proximity to, shellfish growing areas. A copy of this application has also been sent to the VDH-DSS, and DSS has been requested to copy VMRC on correspondence relative to this application.

Please review the application and DSS correspondence. If DSS notifies you that no condemnation of shellfish growing areas would be necessary as a result of the proposed discharge, then VMRC is not required to take any further action.

If DSS indicates in its correspondence that shellfish growing areas will have to be condemned (i.e., reclassified as restricted or prohibited as defined by the National Shellfish Sanitation Program) as a result of the proposed discharge, please fill out the attached certification form and send it to DEQ within 21 days of receipt of the DSS comments.

Alternatively, VMRC may respond to DEQ that more information is needed and that VMRC either intends to or does not intend to perform a field evaluation. If VMRC notifies DEQ that more information is needed and that it intends to perform a field evaluation, VMRC agrees to certify to DEQ within 30 calendar days after receipt of the notice that the condemnation will or will not have an effect on shellfish use now and in the foreseeable future. If VMRC certifies to DEQ that more information is needed and that it does not intend to perform a field evaluation, DEQ will contact the permit applicant to allow the applicant the option of obtaining a field evaluation of the areas proposed for condemnation. If VMRC receives a field evaluation from the applicant, please review the evaluation and fill out the attached certification form and send it to DEQ within 21 days of receipt of the evaluation.

These deadlines are specified in an agreement between the Director of DEQ and Commissioner of VMRC to ensure DEQ can process the permit in a timely manner. If you have any questions, please contact this office at (757) 518–2161 or by e-mail carl.thomas@deq.virginia.gov .

Sincerely,

Carl D. Thomas
Environmental Specialist, Senior

cc: DEQ – TRO/file (VA0091294@ECM)
Enclosure: VPDES Permit Application (via/e-mail transmission)
VMRC Shellfish Certification Form

Virginia Marine Resources Commission - Evaluation and Certification on the Effects of Proposed Shellfish Condemnation

VPDES Permit Number:
Facility Name:
Facility Location:
Description of the designated area:

Presence or Absence of Shellfish; Identification of Species; Results of Survey:

Commercial Harvest Rates:

Private Oyster Ground Leases/Public Ground Designations:

Physical Parameters:

In accordance with 9 VAC 25-260-270, MRC has reviewed the above information for the VPDES application referenced above, and DSS information on shellfish growing areas that will be condemned (i.e. reclassified as restricted or prohibited as defined by the National Shellfish Sanitation Program) if the VPDES permit is issued for this discharge, and concludes the proposed condemnation will have the following effects on the shellfish use now and in the foreseeable future:

Signed: _____

Title: _____

Date: _____

This certification is intended to provide factual information to DEQ required by 9 VAC 25-260-270. This is not a final determination or case decision under the Virginia Administrative Process Act applicable to the above-mentioned facility or VPDES permit application. The final decision to issue or deny the VPDES permit application is within the discretion of the State Water Control Board.

Thomas, Carl (DEQ)

From:	Smith.Mark@epamail.epa.gov
Sent:	Tuesday, May 20, 2008 4:27 PM
To:	Thomas,Carl
Cc:	MacKnight.Evelyn@epamail.epa.gov; Trulear.Brian@epamail.epa.gov
Subject:	Marine Railway process water as a point source

EPA R3 received a question from Carl Thomas VADEQ whether the process wastewater that moves to permeant surface waters from hull treatment processes performed on a ship positioned on a marine railyard was considered a point source?
EPA concludes this discharge to surface waters should be considered a point source based on the following:
1.) NPDES permitting regulations at 122.2 Definitions, defines a point source as"any discernible, confined and discrete conveyance", we believe the earthen channels underneath the railways fit that definition, and,
2.) Sector Q of the EPA Multi-Sector General Permit, section,6.Q.4.3.1 Pressure Washing Area, states, "If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit.
We conclude that the process wastewater discharging to a surface water in this manner should be an NPDES permitted outfall. Thanks

MHS → JRM → CDT → All
5/9
fyi

PPP-645

Frank

File: PHI Shipyards: General

COMMONWEALTH of VIRGINIA

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
http://www:deq.state.va.us

Dennis H. Treacy
Director

(804) 698-4000
1-800-592-5482

July 17, 2001

JUL 2001
RECEIVED DEQ
Tidewater
Regional Office

Mr. Wayne G. Thomas
President
South Tidewater Association
of Ship Repairers, Inc. (STASR)
2 Harper Avenue
Portsmouth, VA 23707-1819

RE: Regulation of Low Pressure Ship Hull Wash Water

Dear Mr. Thomas:

Dennis Treacy requested that I respond to your letter of June 25, 2001, which conveyed your concerns and those of several shipyard members over DEQ addressing ship hull wash water in VPDES permits and requiring the collection of the first half inch of rainfall when a vessel with a TBT-coated hull is in dry dock. I have provided our justification below for why these items have been addressed. However, it is important to realize that information gained through sampling results and site inspections has necessitated some change in the language/methods for handling tributyltin (TBT), process water and storm water in the VPDES permits.

With regard to the issue of addressing water washing, DEQ has not changed any definition to the terms "hydroblasting" or "high pressure water blasting". We have required monitoring of all process waters which represent the various activities within a dry dock, which includes water washing, and this does not constitute a change in regulation. Secondly, DEQ has not stepped away from the use of BMPs for addressing hull wash water, nor are we suggesting it. At this time, we are requiring that the water which has been "treated" through the use of BMPs be sampled. This will provide information on the effectiveness of the BMPs being utilized. In addition, if the BMPs are as effective as the shipyards indicate, there should be no problems or concerns with the resulting monitoring data.

EPA defines process wastewater as "any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, finished product, byproduct, or waste product." We consider any water used against the hull of a vessel to be process water. This would not only include water washing but

eliminate any issue with regard to water pressure. We believe this to be in concert with EPA's definition.

In addition, EPA's multi-sector general permit, which is specific to storm water discharges, recognizes that the water used to remove marine growth is a process wastewater. That permit states "If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted as a process wastewater by a separate NPDES permit."

In relation to the changes DEQ is making in shipyard permit requirements with respect to wash water, our Tidewater Regional Office has been in contact with EPA. EPA has agreed that the wash water is a process water and supports its monitoring to demonstrate BMP effectiveness. As you are probably aware, EPA's proposed metal products and machinery (MP&M) regulation proposes to cover all wastewater generated when a shipyard cleans a ship's hull in dry dock when the cleaning is done in preparation of an MP&M operation. This would include the water used to remove marine growth. Whereas this is a proposed regulation and is subject to change, the EPA personnel responsible for this regulation believe that the monitoring of wash water would provide valuable information.

With respect to the use of BMPs to control the discharge of pollutants from both process wastewater and storm water, DEQ still strongly encourages their use. The monitoring, which now includes wash water, will demonstrate the effectiveness of the BMPs being utilized. Based on the results of data collected, future permits may require either further controls on the wash water or the wash water may be carved out of the monitoring program and handled exclusively through the implementation of BMPs.

All shipyard permits issued by DEQ address tributyltin (TBT) in some manner. There is either a TBT limit or a prohibition on its use at the site. We believe that the requirement to capture the first half inch of rainfall when a vessel having a TBT-coated hull is in the dry dock is necessary. Virginia adopted a water quality criterion for TBT in 1988 and it has been applied to the shipyards which handle TBT vessels. If the first half inch of captured rainfall has a TBT level of 0.05 parts per billion or less of TBT, it may be discharged. If it is greater, then it will need to be treated just like any of the other TBT wastewaters generated. The use of the December 1, 2002 deadline will keep all the shipyards at the same level.

In closing, I would again note that the changes being made to shipyard permits are based on data and site inspections and do not reflect any regulatory changes. I will be discussing the EPA meeting in the Tidewater office with Frank Daniel. If you should have any further questions, please let me know.

Very truly yours,

Larry G. Lawson, P.E.
Director
Water Division

pc. Frank Daniel – TRO

SOUTH TIDEWATER ASSOCIATION OF SHIP REPAIRERS, INC.

2 HARPER AVENUE PORTSMOUTH, VIRGINIA 23707-1819 757-399-7920 FAX: 757-399-7921

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Leo J. Marshall

June 25, 2001

Dennis H. Treacy, Director
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240-0009

Re: Regulation of Low Pressure Wash Water at Shipyards

Dear Mr. Treacy:

As the President of the South Tidewater Association of Ship Repairers (STASR), the primary association representing the ship repair industry in Hampton Roads, I am writing to call your attention to specific water and storm water permitting issues of some concern to our members. Specifically, the Tidewater Regional Office (TRO) of the Virginia Department of Environmental Quality (DEQ) has been employing new definitions of the terms "hydroblasting" and "high-pressure water blasting" that alter and expand the terms of VPDES permits for shipbuilding and repair facilities. These regulatory changes have been developed without input or participation from STASR members. Additionally, several member shipyards have expressed concern over an arbitrary requirement that has been imposed through a consent order signed by the DEQ and a local shipyard requiring collection of the first one half inch of rainfall should a vessel containing the antifoulant tributyltin enter our dry docks or similar structures. This requirement goes into effect on December 1, 2002. Again, we are frustrated by the apparent lack of participation in this regulatory process.

The VPDES permits issued to local shipbuilding and repair facilities routinely contain effluent limitations and monitoring requirements for waters designed to remove marine paint. The new emphasis, within the past six months, is to require monitoring and testing of waters associated with marine growth removals as well. This operation, not new to our industry, has historically been controlled by Best Management Practice (BMP) language. As a matter of fact, in Section 13.0 of the "Best Management Practices Manual for the Shipbuilding and Repair Industry" prepared by and for your agency in 1989, BMP language was provided to address this issue. This BMP approach is consistent with that used to regulate ship repair operations in other states. In summary, the DEQ has historically recognized the difference between the operation of removing marine paint and that, which removes marine growth. Without input from industry, the TRO appears to be altering a long-established regulation.

From a practical perspective, the marine growth from our dry docks and similar structures is normally removed and landfilled. This operation and the BMP that controls it are obviously better than the process of "scamping" which removes marine growth while the vessel is in the water. In the scamping situation marine growth goes directly into the water. This operation is completely unregulated, while the discharge of wash water that does have controls is subject to strict discharge regulations.

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Leo J. Marshall

Some of our members have expressed concern over the requirement for collection of the first half-inch of rainfall that comes off a dry dock handling a vessel containing TBT. We agree that waters associated with TBT removal operations should be contained, collected and treated prior to discharge, but question the need to treat rainfall runoff from dry docks simply because TBT vessels were handled there. Our members are understandably frustrated by not being a part of this negotiation and have not been properly advised in a timely manner of this future requirement. On that basis, we feel this requirement is inherently unfair and should be deleted.

Prior to our writing of this letter, a meeting to discuss these regulatory changes was convened by the TRO on May 11, 2001. At that meeting, several of our members explained our concerns to the TRO representatives. While the meeting was helpful, meaningful progress was not apparent.

We applaud the TRO agreement to participate in a July 19 meeting with the USEPA Sustainability Industry Project to be held at the TRO office to kick off the BMP Subcommittee of this group. We have requested that EPA Permitting and Enforcement Divisions be represented as we delve into permitting options (narrative standards vs. numerical standards) for our industry. We would appreciate the involvement of a representative of your office at these meetings. Mr. Frank Daniel is familiar with this effort and should be able to provide more specifics for your information.

The regulatory changes addressed in this letter will result in significant cost increases for ship repair operations without producing a measurable improvement in water quality as a result of their implementation. As this industry is already experiencing economic impact in the Mid-Atlantic Region, we do not support regulations that put us at an economic disadvantage to shipyards in other parts of the country. Our goal is to encourage more customers to use our local ship repair facilities.

STASR respectfully requests your consideration of these serious issues and would be happy to meet with you at your convenience to discuss further. Thank you very much for your attention to these matters.

Very truly yours,

Wayne G. Thomas
President
South Tidewater Association of Ship Repairers, Inc. (STASR)

WGT/lag

cc: Mr. Francis L. Daniel, DEQ, TRO

A Non-Profit Trade Association, Tax Exempt

SOUTH TIDEWATER ASSOCIATION OF SHIP REPAIRERS, INC.
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EXECUTIVE DIRECTOR

Leo J. Marshall

May 11, 2001

Mr. Francis L. Daniel
Regional Director
Tidewater Regional Office
Virginia Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, Virginia 23462

Dear Mr. Daniel:

As the primary association representing the ship repair industry in Hampton Roads, I am writing to call your attention to an issue of some concern to our members. Specifically, the Tidewater Regional Office (TRO) of the Virginia Department of Environmental Quality (DEQ) has been employing new definitions for the terms "hydro-blasting" and "high-pressure water blasting" that alter and expand the terms of VPDES permits for shipbuilding and repair facilities. Of particular concern to our members is the lack of opportunity for participation in this regulatory development, which has been evolving over the past few years. I am calling this matter to your attention at this time in the hope that it can be resolved in an equitable manner.

The VPDES permits issued to local shipbuilding and repair facilities routinely contain effluent limitations and monitoring requirements for high-pressure water blasting, hydro-blasting, or water-cone blasting used to remove paint from marine vessels (see BMP #8). In contrast, low-pressure water generated from portable machines is designed to remove only the marine growth, such as algae and barnacles, from vessels. Such waters produced from low-pressure washing, which are not new to our industry, have been managed through BMP language and thus have been interpreted not to be subject to effluent limitations. The direction in which the TRO is currently moving produces the result that any water that hits the side of the vessel must be regulated and therefore be subject to monitoring and potential numerical effluent limitations. Without input from the industry, the TRO appears to be altering a long-established regulation.

In Section 13.0 of the "Best Management Practices Manual for the Shipbuilding and Repair Industry" prepared for the Commonwealth of Virginia State Water Control Board in 1989, this activity is described as "Low-pressure water spray used to clean vessel hulls when only the surface layer of sediment and marine growth is to be removed." The BMP provided for this activity is channeling the wash water through filter fences prior to discharge into State waters. The DEQ has recognized the difference between the operation of removing marine paint through the use of high pressure and washing a vessel to remove what comes from the sea, i.e. marine growth and slime.

SOUTH TIDEWATER ASSOCIATION OF SHIP REPAIRERS, INC.
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Daniel Weckstein
Vandeventer Black LLP

EXECUTIVE DIRECTOR

Leo J. Marshall

It should be noted that in the Final National Pollutant Discharge Elimination System Storm Water Multi-Sector General Permit for Industrial Activities published in the Federal Register on September 29, 1995, the United States Environmental Protectio Agency ("USEPA") concentrated on high-pressure removals at shipbuilding and repairing facilities as a potential source of paint solids, heavy metals and suspended solids. In recently proposed Effluent Guidelines and New Source Performance Standards for the Metal Products and Machinery Point Source: Proposed Rule dated January 3, 2001, the USEPA proposed not to cover waters associated with the removal of marine life from drydocks and similar structures as long as that water does not come into contact with MP & M operations. As you know, removing marine growth is the first operation that must be performed when the vessel is lifted out of the water. This ensures that this water does not come in contact with any MP & M operations.

We applaud your participation in the recent meeting with the USEPA Sustainable Industry Project held in Hampton Roads. We understand that you, Mr. Bob Goode and/or Mr. Carl Thomas have been appointed to the BMP Subcommittee of this group. We ask your consideration to develop this issue through this subcommittee.

STASR respectfully requests your consideration of this serious issue. It is our position that water washing has been historically controlled through the implementation of BMPs and we support the continuation of this policy. We would be happy to meet with you at your convenience to discuss this further. Thank you very much for your attention to this matter.

Sincerely yours,

Wayne G. Thomas
President
South Tidewater Association of Ship Repairers, Inc. (STASR)

WGT:lag

MAY 11 '01 11:16 TMTI/STASR P.3/3

CHESAPEAKE MARINE RAILWAY, LLC.

October 5, 2011

Janine L. Howard
Water Permit Writer
DEQ Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

Re: VPDES Permit No. VA0091294- Chesapeake Marine Railway

Janine Howard,

As per your request in August of this year I would like to enclose the following information that should detail the similarities between our two marine railways.

Per our current permit, the DEQ has identified our two railways out falls as 008 & 009. See permit map.

The work performed on each railway is exactly the same. We haul vessels for annual service, which includes power washing, exterior repairs, bottom paint and various other minor services. The only difference between the two railways is its size and weight capacity. Location 008 can haul vessels below seventy feet in length and less than 100 tons. Location 009 capacity is less then 140 in length and no greater than 300 tons. The work performed on either railway is the same. Furthermore since these railways are located side by side and only 13 feet from outside work area to the other we feel they are identical since the scope of work on each railway is the same.

With all that said we are seeking a waiver from the DEQ to combine the process (outfalls 008 & 009) into one outfall and the same for storm water outfalls – 908-909.

Jon Farinholt
COO
Chesapeake Marine Railway

548 DEAGLE'S ROAD • DELTAVILLE VIRGINIA • 23043
PHONE: 804-776-8833 • FAX: 804-776-8835

Thomas, Carl (DEQ)

From: Jon Farinholt [jon@chesapeakeboatworks.com]
Sent: Wednesday, October 05, 2011 9:36 AM
To: Howard, Janine (DEQ)
Subject: RE: VPDES Permit No. VA0091294- Chesapeake Marine Railway- Reissuance Reminder Letter
Attachments: DEQ - Letter - 10-5-11 - Waiver.pdf

Janine,

Attached you will find the additional information your requested to combine the out falls for the railways.

Let me know if you need any further information.

Jon Farinholt
Chief Operating Officer
Chesapeake Boat Works
804-776-8833
www.chesapeakeboatworks.com

From: Howard, Janine (DEQ) [mailto:Janine.Howard@deq.virginia.gov]
Sent: Tuesday, August 02, 2011 8:40 AM
To: Jon Farinholt
Subject: RE: VPDES Permit No. VA0091294- Chesapeake Marine Railway- Reissuance Reminder Letter

Jon,

Thank you for submitting the data for EPA Form 2C. What is the unit of the TRC data you provided on Attachment A? The QL is in terms of micrograms per liter (100µg/L) and you reported <2. Is this in mg/L or µg/L? To my knowledge the test for TRC is not sensitive enough to get results as low as 2µg/L so I am assuming the < 2 is in terms of milligrams per liter. Please can you confirm the unit or supply the lab sheet with the TRC analysis- I am not able to locate it on the lab sheets that you did submit.

Additionally, please see the attached email. I do not believe I ever received a response. Please let me know if the list of materials is still accurate. I am mainly looking for a summary of the types of materials that are stored on your site and confirmation that they are all stored under roof.

I am still working on your waiver request but need some more information from you in order to approve the single submittal of Outfall 008 data (in lieu of data for both Outfalls 008 and 009). Please can you submit written documentation to support the claim that the discharge from Outfalls 008 and 009 are identical. I need a rationale from you to substantiate the waiver request and provide documentation that the process discharge from 008 and 009 is substantially identical. If you can provide a summary of the similarities of the work carried out on the two railways and provide any data that you may have to support you request, I would appreciate it.

Please let me know if you have any questions. Sincerely,

Janine L. Howard
Water Permit Writer

DEQ Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
t: (804) 527-5046

f: (804) 527-5106

This email should not be considered a legal opinion or a case decision as defined by the Administrative Process Act, Code of Virginia § 2.2-4000 *et seq.*

From: Jon Farinholt [mailto:jon@chesapeakeboatworks.com]
Sent: Monday, May 23, 2011 1:01 PM
To: Howard, Janine (DEQ)
Subject: RE: VPDES Permit No. VA0091294- Chesapeake Marine Railway- Reissuance Reminder Letter

In response to your May 18th letter see attached.

Let me know if you have questions.

Jon Farinholt
Chief Operating Officer
Chesapeake Boat Works
804-776-8833
www.chesapeakeboatworks.com

From: Howard, Janine (DEQ) [mailto:Janine.Howard@deq.virginia.gov]
Sent: Monday, May 23, 2011 11:57 AM
To: Jon Farinholt
Subject: RE: VPDES Permit No. VA0091294- Chesapeake Marine Railway- Reissuance Reminder Letter

Great, thanks!

Janine L. Howard
Water Permit Writer

DEQ Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
t: (804) 527-5046
f: (804) 527-5106

From: Jon Farinholt [mailto:jon@chesapeakeboatworks.com]
Sent: Monday, May 23, 2011 11:58 AM
To: Howard, Janine (DEQ)
Subject: RE: VPDES Permit No. VA0091294- Chesapeake Marine Railway- Reissuance Reminder Letter

008

Jon Farinholt
Chief Operating Officer
Chesapeake Boat Works
804-776-8833
www.chesapeakeboatworks.com

From: Howard, Janine (DEQ) [mailto:Janine.Howard@deq.virginia.gov]
Sent: Monday, May 23, 2011 11:23 AM
To: Jon Farinholt
Subject: RE: VPDES Permit No. VA0091294- Chesapeake Marine Railway- Reissuance Reminder Letter

Jon,
Which outfall are these results associated with? Thanks!

Janine L. Howard
Water Permit Writer

DEQ Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
t: (804) 527-5046
f: (804) 527-5106

From: Jon Farinholt [mailto:jon@chesapeakeboatworks.com]
Sent: Monday, May 16, 2011 5:09 PM
To: Howard, Janine (DEQ)
Subject: RE: VPDES Permit No. VA0091294- Chesapeake Marine Railway- Reissuance Reminder Letter

Janine,

Attached are the results from the lab.

Let me know how you want them submitted.

Regards,

Jon Farinholt
Chief Operating Officer
Chesapeake Boat Works
804-776-8833
www.chesapeakeboatworks.com

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Road, Glen Allen, Virginia 23060 804/527-5020

TO: Curtis Linderman, PRO Water Permits Manager
FROM: Janine Howard, PRO Water Permit Writer
DATE: October 5, 2011
SUBJECT: Request for Application Waiver - Chesapeake Marine Railway VA0091294
COPIES: File

Facility Description:
Chesapeake Marine Railway is a boat repair facility and boatyard located at 548 Deagle's Road in Deltaville, VA. The facility is located on Fishing Bay Harbor and operates two marine railways (300 ton and 100 ton), a 50-ton travel lift, and a boatyard with storage space for approximately 200 boats. Other facilities on site include an office/storage building, a mechanics shop, metal shop, woodworking shop, wood storage shed, and hull shop. The work on the railways varies, with long periods of time when they are vacant. Based on the application, the owner estimates he power washes approximately five boats per year on the two railways combined, using an average of fifty (50) gallons of water per event. Power-washing on the concrete pad associated with Outfall 001 has ceased according to the 2011 permit application and outfall 001/901 is to be removed.

The current effective permit expires on October 30, 2011. The 2006 permit features the following permitted outfalls:

Outfall	Discharge Source
001	Concrete pad and settling tank with piped outlet
008	Marine railway (100 ton)
009	Marine railway (300 ton)
901	Outfall 001 during a storm event
908	Outfall 008 during a storm event
909	Outfall 009 during a storm event
002	Storm water pond (roadway drainage and possible boatyard drainage)

Outfalls 003, 004, 005, 006, 007 (storm water not associated with industrial activity) are identified in the permit, and are associated with wooden piers located at the facility. No boat repair activities or power washing are carried out at these outfalls. No monitoring or sampling is required by the permit for these outfalls.

Waiver Request:
A waiver request was received by PRO on April 27, 2010. The waiver request is as follows:

1. Outfall 009 – The permittee requests that with this permit reissuance Outfalls 008 and 009 be considered substantially identical. The permittee wishes to run Attachment A and Form 2C testing on Outfall 008 but not 009. Outfalls 008 and 009 both represent the location of a marine railway. Although the railways are different in size, the work performed at either location is identical and the two locations sit side by side. The permitee estimates a total of five boats are power washed per year on both railways combined. Attachment A and Form 2C data was received by PRO on 5/16/2011 for Outfall 008, therefore the waiver would be for Outfall 009 Attachment A and Form 2C testing. See rationale the letter dated October 5, 2011 for the permittee's assertion of identical outfalls.

2. Outfalls 908 & 909 – The permitee consistently contends that sampling in these two locations is not possible and requests a waiver from the sampling requirement for Form 2F for both of these outfalls. The 2011 application states "There are no sampling points for storm water outfalls for locations 901, 908, 909 & 002 due to the layout of the property and the nature of the ground-sand." DEQ records indicate that storm water samples have been collected only once for these outfalls throughout the current effective permit term.
3. Outfall 002 - Request for waiver from sampling requirement for Form 2F. The permittee has consistently claimed that sampling Outfall 002 is not possible as storm water from the boatyard does not discharge via Outfall 002. The permittee contends that no storm water from the boatyard ever enters the sedimentation basin via Outfall 002 and that any water found in the basin can be sourced to a pipe that runs underneath the boatyard and drains water from Deagles Road (State Route 1104).

Staff Comments

Staff comments address each waiver request in the order that they are listed in the "waiver request" section. Please see the waiver memo appendix document (begins on page 4) for photographs of the site.

1. Outfalls 008 & 009: A process water discharge occurs from Outfalls 008 and 009 when a boat is power-washed on the marine railways. According to the 2011 application, the permittee estimates there are approximately five discharge events per year, accounting for power-washing activity occurring at both outfalls 008 and 009, with an average total volume discharged of fifty (50) gallons per event. Ground cloths are installed beneath each railway to collect debris when they are occupied. The cloths are removed when the railways are unoccupied and are disposed of. The boat repair and maintenance work performed at both locations is identical and the waste streams are not expected to differ greatly (see rationale letter dated October 5, 2011 submitted by the permittee). The 2006 permit requires testing at each outfall twice per year. With the 2011 permit reissuance it is intended that monitoring in any given period will be required at either Outfall 008 or 009, and the permittee will be expected to alternate back and forth between each marine railway. The permittee is aware that if outfalls 008 and 009 are considered substantially identical in the 2011 permit, then an identified water quality problem (or permit limitation) at one outfall will be translated as a perceived problem (and permit limitation) at the other outfall as well. Equipped with this knowledge the permittee wishes to proceed with the outfalls being deemed substantially identical and is confident based on toxicity testing data that the process water is not toxic. Staff recommends allowing the use of a single dataset (submitted for Outfall 008 on 5/16/2011) to characterize the process water at both Outfalls 008 and 009 for the purpose of drafting the 2011 permit, given the similarity between industrial activities carried out at each outfall. Staff recommends that a Water Quality Criteria Monitoring (WQCM) special condition be included in the permit to require that Attachment A (WQCM) be performed on Outfall 009 during the fourth year of the permit term. This will ensure that an extensive pollutant scan of Outfall 009 will be available for use during the next reissuance.

2. Outfalls 908 & 909: The permittee is steadfast in his position that collection of storm water samples from Outfall 008 and 009 is impossible due to near-immediate absorption of storm water into the sandy ground (beach) during a rain event. Two site inspections were conducted to evaluate the groundcover and feasibility of storm water sampling at the marine railways. It is staff's determination that a point source discharge of storm water which comes in contact with the ground below and around the marine railway area is difficult to identify as the site is presently configured. It is anticipated that structural site modifications will be necessary to make storm water sampling easier and the permittee is encouraged to develop a long-term plan to address the sampling difficulties associated with storm water on site. As the site is presently configured, staff believes that storm water sampling of storm water running down the side of the hull is feasible. The VPDES permit regulation 9VAC25-31-120 Storm water discharges, identifies the regulatory requirement for a facility which discharges storm water associated with industrial activity to obtain a VPDES permit. 9VAC25-31-120 B. (5) requires quantitative data based on samples collected during storm events to be included as part of the application for storm water discharges associated with industrial activity; a completed EPA Form 2F is the source of the quantitative data required by the VPDES regulation. 40 CFR 122.21- Application for a permit, establishes the Federal requirement for a complete application and the required submission of EPA Form 2F for discharges of storm water associated with industrial activity.

As such, staff recommends the denial of the waiver for EPA Form 2F testing for Outfalls 908 and 909. Testing of storm water as part of the reissuance application is a Federal requirement for an application for a permit which authorizes the discharge of storm water associated with industrial activity. It is the permittee's responsibility to comply with Federal and State regulations to sample discharges of storm water associated with industrial activity and the permittee should explore long-term solutions to make storm water sampling more easily feasible. Furthermore, a review of DEQ records indicates that storm water sampling was completed in 2008 and DMRs were submitted for outfalls 002, 908, and 909 (received date 10/14/2008). Since sampling was completed once it is logical to conclude that this sampling technique can be replicated. The 2008 data is comprised of dissolved copper, lead, zinc, total petroleum hydrocarbons (diesel range organics), volatile organic compounds (gasoline range organics), chemical oxygen demand (COD), and TSS analyses for each storm water outfall identified in the 2006 permit. This data may be resubmitted in support of the application, however EPA Form 2F Section VII Part A consisting of oil and grease, BOD_5, total nitrogen, total phosphorus, and pH (in addition to COD) must also be completed for outfalls 908 and 909 in order for the application to be technically complete.

3. Outfall 002: It appears outfall 002 originated due to the need to drain water from Deagles Road (State Route 1104) during storm events. Deagles Road (southeast of State Route 1102) is approximately 0.55 mile in length. Chesapeake Marine Railway is located at the end of the road to the south. Fishing Bay Harbor Marina sits opposite Chesapeake Marine Railway. The first quarter mile of Deagles Road (heading towards Fishing Bay) is farmland to the southwest (same side as the facility) and woodland to the northeast. A drainage ditch runs the length of Deagles Road, along the perimeter of the farmland, as well as on the north side of the road. This drainage ditch runs underneath Berryville Road and continues on to a pipe which runs underneath the Chesapeake Marine Railway Boatyard and empties into a sediment basin on the south side of the property. It appears the sediment basin was built as a BMP to allow settling of the roadway storm water runoff. The sediment basin has an outlet on the south side which discharges to a large lake south of the property; the lake level is controlled by an adjacent property owner and discharges to Fishing Bay. The permittee states he has never seen the sediment basin fill up to the point at which it would discharge to the lake. A second site visit was performed to assess the appropriateness of Outfall 002 in this permit. The visit did yield the discovery of rip rap on the north edge of the sediment basin which appears to be designed to channel storm water from the boatyard into the basin. However, based on observation of the facility, the likelihood of a storm water discharge associated with the boatyard ever entering the sediment basin is extremely small. The boatyard is flat and is composed of a highly porous, permeable surface. The permittee states that he has never had to re-grade the boatyard or replace any gravel, an indication that erosion from the boatyard is insignificant. It is anticipated that during rain events, absorption into the ground would occur rather than a storm water discharge. Although this is the case, the sediment basin does appear to have been designed with a rip-rap spillway built to channel storm water from the boatyard. For this reason, staff recommends retaining Outfall 002 in the permit, with the expectation that only under extraordinary circumstances will a discharge from the boatyard occur. The compliance point will be clearly defined in the 2011 permit as being at the bottom of the rip rap spillway leading from the boatyard to the sediment basin, rather than the terminus of the pipe which exits the sediment basin (to the lake). Requiring the permittee to sample at the pipe terminus is not appropriate as the storm water is not characteristic of boatyard runoff, rather it is drainage from the 0.55 mile long Deagles Road. For this permit reissuance, it is recommended that the testing waiver for Outfall 002 be approved due to lack of a discharge and the availability of sufficient data, submitted to DEQ in 2008, to be able to draft the permit.

Staff Recommendation Overview:
Based on staff comments, above, it is recommended that the requested waivers for Outfalls 009 and 002 be granted for this permit reissuance only. It is recommended that the waiver request for Outfalls 908 and 909 be denied based on Federal and State requirements to submit quantitative data as part of a complete application for authorization to discharge storm water associated with industrial activity.

Approved: As recommended

Water Permit Manager

October 18, 2011
Date

Appendix: Photos of Site (see next page)